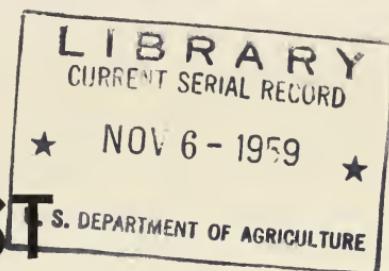


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# COMMUNIST CHINA'S AGRICULTURE

*Production, Trade, and  
Policy Developments Affecting U.S.  
Farm Products in World Markets*

Foreign Agriculture Report No. 115

UNITED STATES DEPARTMENT OF AGRICULTURE  
Foreign Agricultural Service

## PREFACE

The mainland of China has long held an important position among the leading nations of the world as a producer, consumer, and trader in farm products. In total land area, it is exceeded only by the Soviet Union and Canada, and in wealth of agricultural products, only by the United States. Within its borders, China produces virtually every kind of farm crop and animal to some extent. So, except for certain tropical products, it closely approaches self-sufficiency in agriculture although at a greatly depressed standard of living for its vast and growing population—now estimated to total well over 600 million, nearly one-fourth of the people in the world.

According to Western standards, China today, as in much of its long history, is a food-deficit country, but domestic shortages have not deterred the government from exporting agricultural products during the past decade in order to pay other countries for heavy equipment and material necessary for building up a modern industrial complex. The will and zeal for industrializing at any cost virtually assure that exporting farm products will continue for the foreseeable future despite urgent domestic needs.

Significantly, from a world trade point of view, China and the United States produce numerous crops that are alike or similar in use, such as soybeans, rice, vegetable oilseeds, hides and skins, and flue-cured tobacco, and hence are directly competitive in world markets.

Also, several important foreign markets for U.S. agricultural products are beginning to feel the effects of China's growing industrial production and exporting activities; this may lead to reduced markets for the United States. For example, in 1958, traditional cotton textile suppliers of the Southeast Asian markets—and important importers of U.S. raw cotton—found themselves being replaced in these markets by the Chinese textile industry's undercutting prices.

In a broader and possibly a more important perspective, China is rapidly assuming an increasingly active role in the economic and political affairs of the Far East and the world. Since China's capabilities in these respects hinge in great part on the successes or failures in the agricultural sector of the economy, the Free World has still another reason—apart from competitive consideration for markets—for interest in developments affecting Chinese agriculture.

Appraising these developments, however—or any aspect of Communist China's agriculture—is complicated by lack of reliable statistics and means of verifying reports. Thus this study can do no more than reach approximations that appear to be reasonable in the light of what is known about Chinese conditions and developments.

Even before the Communists took over, no complete, reliable body of production statistics had been developed for China, although Nationalist China was making progress between 1931 and 1937 before the Japanese attack. Thus, prewar statistics afford no reliable index against which Communist claims can be measured. As for Chinese Communist statistics, they are fragmentary, often inconsistent, and subject to political bias in addition to containing the usual statistical errors in estimating production.

The United States cannot appraise these statistics and other official reports inside Communist China since it has no on-the-spot reporting. Instead it must rely on work done from peripheral positions.

Taking into account these limitations, this study proposes therefore only to summarize and briefly analyze the fragments of information available, with the hope that a reasonably accurate general picture of China's agricultural production and trade will emerge.

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# Communist China's Agriculture

## *Production, Trade, and Policy Developments Affecting U.S. Farm Products in World Markets*

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### Summary

THE DOLLAR VOLUME of Communist China's agricultural exports to the Free World has trended upward, increasing from \$290 million in 1954 to \$360.1 million in 1957. Final statistics for 1958 will likely show some further growth. During the same period the Chinese authorities claim that trade both ways in all types of products with all countries has increased sharply, paralleling the rapid expansion taking place in the Chinese economy.

In 1957, China's exports of farm products to Free World countries were only about 8 percent of U.S. exports to these countries and have been around 10 percent in other recent years. About 75 percent of China's exports of food and fiber are said to be going to the Soviet Union and other nations of the Communist Bloc. Such Chinese shipments limit the availabilities for exporting to Free World countries and reduce competition for U.S. farm products which, if Free World markets could be found, might otherwise be considerable.

Sino-U.S. competition in world markets for farm products stems from the fact that both Mainland China and the United States are major agricultural nations. The prevailing wide range of climatic and soil conditions in the vast land areas of China permits China to engage in practically every known crop and livestock enterprise to some extent. China and the United States are similar in this respect; thus the two produce many farm products that are alike or similar in use, and so are competitive in world markets. U.S. export interests are most specifically affected by such Chinese-grown exports as soybeans and other oilseeds, live animals and meat, eggs, rice, fruits and vegetables, hides and skins, plus fats and oils. The areas of keenest competition are the Far East, most notably Japan and Hong Kong, and the industrialized countries of Western Europe.

Under the control of the Communist Party, China is making an unsparing effort to overcome the nation's backwardness and to become a modern power. Present rulers gained control of the Mainland in 1949 and immediately embarked on a broad program of economic reconstruction to be followed by comprehensive plans and programs for economic development. Economic plans give overriding priority in allocating capital investment funds to developing industry, especially heavy industry. The authorities' aims are to leap from a backward agricultural economy into an advanced modern industrial power almost overnight. Agriculture is the heart of the economic

development program, in that farm exports are counted on to pay for the bulk of the heavy machinery, powerplants, complete factory installation, transportation equipment, and petroleum supplies that must be imported for a rapid buildup of industry.

The entire Chinese labor force has been regimented and thrown into a giant work effort directed at improving the agricultural economy. Programs for modernizing agriculture stress the substitution of a cheap and plentiful supply of labor for inadequate capital investment. The authorities have been concentrating first on carrying out agricultural improvement projects that are inexpensive and relatively simple to do, and that show quick results.

Impressive progress has been made in building small-scale irrigation projects, digging wells, draining water-logged areas, clearing small plots of land, and in general carrying out work that the peasant organization can do with its own labor and local resources, using simple tools and available equipment.

Agricultural production has recovered prewar levels and has apparently made some moderate progress, owing largely to the hard work and skill of the peasants plus the tendency for a country to recover following a war period. Production of grains and industrial crops has increased fastest as a result of the state's policy of diverting resources to the production of high-yielding food crops and enterprises that supply industrial raw materials. Partly as a result of this selectivity in the use of resources, production of livestock, oilseeds, and vegetables has suffered and chronic shortages have persisted.

Explosive population growth and rapid industrial development are speedily increasing the need for more food and industrial raw materials. Any advances that China makes in increasing production above rising needs will come with great difficulty and will very likely be only a temporary gain unless population growth is curbed. Trying to squeeze a century or more of industrial revolution into a few years gives rise to a constant state of economic stress and shortages, with resources and human endurance purposely extended to the limit. On the hopeful side for the Chinese people, there is considerable reserve production potential in the country's agricultural economy. But to fully exploit this reserve will require that modern science and technology be brought into use. The present regime has outlined scientific and technological plans to bring Chinese agriculture abreast of modern standards. Most significantly, success of the plans is contingent on whether domestic Chinese industry now taking shape can adequately provide the chemical fertilizers, insecticides, modern medicines, improved farm equipment, power tools, transport facilities, and the many other production requisites soon enough. Also, the millions of peasants now carrying the burden, though not sympathetic to the regime, must at least be kept participating in a disciplined manner.

Meanwhile, for the foreseeable future, the Chinese Communists can be expected to continue exporting agricultural products because they must, to

their way of thinking, in order to pay for imports of industrial equipment and supplies. The total amounts of farm products to be exported depend most specifically on the government's calculated need for foreign exchange to pay for purchases from both the Communist Bloc and Free World sources. Availabilities for exporting to the Free World markets in which the United States is most interested depend largely on production levels, effectiveness of the state's purchasing and rationing programs, and the amount going to the Soviet Union and other Bloc nations.

It is misleading, however, to conclude that the Chinese authorities cannot or will not export farm products out of consideration for consumer needs. Supply and demand conditions put some general limitations on availabilities for exports, but the Government of China is not rigidly bound by any domestic supply and demand considerations as are Free World countries. The state buys up and controls large stocks of products and decides on what disposition is to be made of goods produced. Communist countries value trade highly as a diplomatic and political device as well as a crucial necessity for obtaining vitally needed foreign exchange. Thus the economic and political incentives can easily and do overshadow pressing domestic need in official decisions where the policy is to let nothing stand in the way of building a powerful industrial complex in record time. Satisfying the needs of the state and not the consumer is paramount. From the official's point of view, the crucial measure of progress is the rate of growth in industrial capacity.

## **Characteristics of Chinese Agriculture**

That China's agricultural production has, over the years, often fallen short of providing sufficient food and fiber for the population's needs is well known. Less well known, however, are the causes of shortages and the balances between the positive elements in Chinese agriculture and the weaker spots.

The crux of China's agricultural problem can be capsuled briefly: Too many people and too few acres of arable land. Probably no other people on earth have a more unfavorable legacy in this respect than those on Mainland China. The population of the country is estimated by the Chinese authorities to be well over 600 million, and is said to be expanding at the rate of 2.2 percent annually. This massive population relies on agriculture in large part for food, shelter, clothing, and fuel. To appreciate the seriousness of the man-land ratio, this enormous aggregate and growing demand must be measured against a very limited wealth of cultivable land.

### **Land**

China, with a vast land area estimated at 3.8 million square miles, is larger than the United States. But this expanse is misleading because a great part of it is mountains, cold plateaus, and desert area—land that is

too steep, too cold, or too dry for working. An estimated 11.5 percent of the total area is already under cultivation, which provides less than half an acre of cultivable land per capita; and only a small percent of the total is judged economically suitable for reclaiming, according to the most reliable and objective estimates available. Reclamation work could perhaps add several million acres but this alone would still fall far short of providing the solid agricultural base needed for adequate agricultural production.

Moreover, economic surveys made by non-Communist agricultural analysts point out that expanding acreage significantly in China would be increasingly expensive, and would compete for the limited investment capital which is badly needed, and could be more profitably used, to expand industrial capacity. Yields on areas reclaimed could be expected to be low as cultivation is extended into marginal areas. Scattered grave mounds in heavily populated sections take up considerable land which, in the past, social custom did not permit being leveled. But it is not expected that the grave mounds will be respected for long. Already reports are that the leveling is under way or completed in some areas.

A further problem that discourages any large-scale land reclamation is the fact that the most promising new land areas are located in Manchuria and northwestern China. Ninety-six percent of China's population live in the south and along the eastern shores. Life in the frontier areas is hard; resettling people and maintaining them until established is expensive, and their successful adaptation is uncertain.

## Climate

China's vast size, extending from a temperate north to a subtropical south, permits a wide diversification of agriculture; in fact, China can grow within its borders almost all types of crops, although not in the amounts required. Also, weather and other conditions permit China to carry on an intensified type of farming by such practices as multiple cropping, inner cropping, and close planting. Much of the cultivated land, particularly in South China, supports two and, in some cases, three crops a year. The Communist authorities now claim that over 40 percent of the land is planted more than once, and a concerted effort is being made to extend the practice of multiple cropping to other areas. This practice varies greatly from region to region, however, rising from a very small percentage in the winter wheat area to 76 percent in the double-cropping rice region of the south.

On the other side of the picture are the calamities that have plagued China for centuries—drought, typhoons, and floods—which have caused much of China's suffering from famine. Climatic conditions are, without doubt, the leading determinants influencing levels of agricultural production in a given year. Measures to accommodate agricultural practices to these calamities confront China with one of its most challenging and most formidable problems if agricultural production is to be expanded and strengthened.

## Labor and Soil

China's vast supply of human labor has been rightly termed its greatest asset in production. Certainly, as able cultivators and industrious workers, the Chinese peasants have been a steady influence and a pillar of strength throughout China's long and turbulent history and have given valuable support in promoting agricultural production despite extreme difficulties. The peasants have won special acclaim from foreign observers for their ability to learn empirically, for their resourcefulness, and for their ability to formulate farming practices which are surprisingly practical under existing local conditions and within the limit of available facilities and resources.

By using their own and family labor unsparingly to cultivate their small plots of land (very much like gardening) and to maintain soil fertility, in the sense of giving back to the land what was taken out of it, and to provide water where rainfall is inadequate, the Chinese peasants as a group produce large quantities of farm products, and obtain per acre yields that compare reasonably well with prewar yields of the more advanced agricultural countries. But the returns to labor have been low and the individual peasants have been plagued with poverty.

This does not mean, however, that the peasants have, over the years, maintained and improved the productivity of the soil. Despite thrift and frugality and painstaking care, farming the soil intensively for centuries, largely without the benefit of commercial fertilizer, inevitably pulls down the supply of essential plant food elements and organic matter and leads to the loss of topsoil from wind and water erosion. However, with good soil management practices and with ample soil amendments, there is no reason why Chinese soils cannot in time be revitalized and made much more productive, as have soils in other parts of the world.

On balance, the problems of China's agriculture overshadow elements of strength. However, the fact remains that this agriculture is providing food, shelter, and clothing for the most heavily populated nation in the world.

## Food Crops

Economic considerations have forced China to a predominantly grain economy. Well over 80 percent of the average Chinese caloric intake comes from grains. And a correspondingly high proportion of cultivable land area is devoted to producing grain crops. By consuming grain direct, rather than feeding livestock to be slaughtered and eaten as human food, the Chinese maximize the number of calories that can be produced on each acre of land, but sacrifice quality in the diet, especially in certain minerals and proteins found in animal products.

Of the grain crops produced, rice in the south and wheat in the north predominate as the main staples. China is by far the leading rice producing country in the world, with more than one-third of total production. And it is one of the world's largest wheat producers.

In addition, Chinese grain production includes large quantities of coarse grains, such as barley, corn, kaoliang, millet, and oats. These are usually referred to as miscellaneous grains, but nevertheless are highly important in total production.

Other important food crops on the Mainland are soybeans, broadbeans, black beans, mung beans, peanuts, rapeseed, sesame, cottonseed oil, sweet and Irish potatoes, sugarcane, and sugar beets. These crops are supplemented, though by no means adequately, by great quantities of many kinds of fruits and vegetables.

## Industrial Crops

The production of industrial, or technical, crops bears a highly important relationship to the overall Chinese economy. These crops furnish much of the raw material essential to the handicraft work carried on in the home and to the nation's light commercial industries, and at the same time provide considerable quantities for sale in foreign trade. The most important are cotton, jute, tobacco, tea, silk, and tung oil.

Cotton is easily the leading fiber crop grown. It supplies the large cotton textile industry and most of the nation's clothing requirements. China is among the leading cotton producing countries of the world, but does not produce enough of the right type for its domestic needs. Small quantities are being imported. However, self-sufficiency in those types suitable to Chinese growing conditions is a goal being pursued in the present program. The ruling regime is pushing cotton production and expanding the textile industry not only to provide textiles for domestic use but also to increase exports of textiles. Both the quantity and quality of Chinese cotton textiles are reported to have been on the upgrade in 1958-59, as China bid for world markets.

The Chinese have long been noted for their silk and tea. However, both of these crops have declined in relative importance, owing to production difficulties caused by the lack of attention and progress in production practices during the war years. These enterprises were particularly hard hit by the Japanese attack and occupation. The present regime is trying to promote recovery, but much time is required for reconstruction and progress appears to be slow despite official emphasis. Meanwhile, other Far East countries have moved ahead as the leading exporting countries of these items. But as Chinese production increases, competition for the world tea and silk markets may be intensified.

Historically, tung oil, a product of many important uses, has been one of China's most valuable industrial crops for exporting. Before 1937 China was the only important source in the world. Much of this crop found a market in the United States. Chinese production of tung oil has apparently declined from prewar levels. Some of the former markets in the Free World have already been lost to lower-priced substitute oils with a more reliable supply source and to new areas of tung oil production.

Tobacco is grown to some extent in nearly every province in China, but except for the flue-cured crop it is largely for home consumption. Production is being emphasized by Chinese authorities with a view to expanding it and also exports. Tobacco, with its high labor requirements and its high dollar value per acre, fits advantageously into China's pattern of resource uses and economic need.

## Livestock

Large numbers of livestock are produced in China, even though the nation's diet is basically from plant sources; hogs and poultry predominate. Much of China's exports of agricultural commodities consist of livestock and poultry products, such as hides and skins, hog bristles, wool, eggs, and feathers. Despite their numbers, livestock are produced in an unproductive, backward way, from a Western viewpoint. Improved methods of breeding, feeding, and management, which have made such vast improvement in the livestock industry of advanced livestock producing countries, have not been acquired by the Chinese, or are not in general use.

Also the population pressure on the land virtually rules out any extensive developments of grazing land in the heavily populated areas. In the regions where much of the livestock is produced, animals are maintained more or less as scavengers to utilize waste products and as a sideline to grain farming. Also, China has serious problems with infectious parasites and nutritional animal diseases. It was estimated before World War II that about 12 to 15 percent of the cattle and water buffaloes, 20 to 25 percent of the swine, and 60 percent of the poultry died each year of infectious diseases alone. Parasites and malnutrition caused serious losses in addition.

## Technology

For many reasons, China has not kept pace with improvements in agricultural techniques. This failure underlies and aggravates many of the current problems, in that it has prevented the country from making the best use of its limited agricultural resources and overcoming and adjusting to its inherent difficulties. Correcting this scientific and technological lag will take time and large outlays of capital. Besides, providing the essentials for modern agriculture depends in large measure on expanding those industries within China that supply agriculture—plants to manufacture farm machinery, chemicals, and especially fertilizer, to mention a few.

The need and the requirements for improving Chinese agriculture have long been known. The crux of the question is how to effect changes with the means available—capital, land, and technically trained labor. Actually, between 1928 and the beginning of the Japanese attack in 1937, considerable progress was made in seed improvement, building dikes and canals, and the furthering of agricultural education. The nucleus of trained agriculturalists, research work started, and other accomplishments in the prewar 10-year period provided some basis favoring progress in the postwar period.

Resource surveys and economic planning carried out before and shortly after the end of World War II by the Nationalist Government assisted by technical adviser teams from the United States called attention to the many specific and long-standing weaknesses in China's agriculture resulting from lagging technology particularly; and plans were adopted for encouraging a large agricultural development and improvement program with the following objectives: (1) Expand production area by land reclamation and extension of multiple cropping and close planting; (2) improve irrigation and flood control; (3) provide an adequate supply of chemical fertilizers and other requisites of production; (4) improve seed and livestock breeding; (5) control animal and plant diseases and insect pests; (6) increase the efficiency of labor; (7) provide a network of transport facilities; (8) increase research and educational activities with strong emphasis on extension work; (9) provide production capital at reasonable rates of interest.

These objectives were to be accomplished under a free enterprise system aided by the national government, but the plan did not progress far before control of the Mainland was lost to the Communists in 1949.

The Communists are attacking the same problem areas, but their approach is radically different. It is the interplay between the application of science and modern technology, on the one hand, and the Communists' methods of organizing and forcefully exploiting the people, on the other, that tends to confuse the Chinese agricultural production picture.

## Economic Planning

Detailed and coordinated planning is basic in the standard Communist approach to the problem of promoting economic growth and progress. The corollary to planning is national regimentation employed as a means of carrying out ambitious plans. Being devoted Communists the Chinese authorities, as expected, have followed this approach and the Soviet Union's example with strategic modifications to meet Chinese conditions. A master economic plan is providing the framework in which the economic, social, and political life of China is developing and evolving. The plan is essentially complete, in that long-term, intermediate, and annual targets have been established, and embrace every sector of the national economy. Plans are subject to modification, tactical shifts, change of pace in implementation, but the end objectives of sweeping away the existing social and economic structure and building an industrialized communistic society as a replacement remain constant.

As a practical matter the Central Government is the final authority for approving and coordinating plans for each sector of the economy. It also formulates the directives for implementing plans. Thus, it attempts to exercise control, make necessary adjustments, and force the pace from a central position of authority.

During the first 3 years, officially referred to as the recovery period and lasting from 1949 through 1952, the authorities concentrated on organizing and installing a new and powerful national government; bringing the country under complete Communist control; destroying the social and economic power of landlords and rich peasants and elevating the poor peasant class under full Communist leadership and control; and ending inflation and reconstructing the economy. The speed with which work went forward on these tasks reflects the vigor of the regime's unbending determination to have cooperation from each individual and group and demonstrates also a considerable capacity to organize. Progress made toward the above objectives laid the essential groundwork for the series of production drives, or 5-year plans, to follow.

The guiding long-term plan for agriculture was announced in 1956 and officially labeled the "12-Year Draft Agricultural Development Plan." Essentially it is in the nature of a perspective outline, and so is not worked out in any great detail. As announced, it does little more than establish broad production targets and outline general measures that are believed to be necessary for reaching desirable goals. It does, however, reveal the regime's views on agricultural problems and on programs for dealing with them. Foreign observers who have studied Chinese planning techniques have concluded that the long-term planning is done in a "rough and ready manner" without the detailed study and analysis required to make the plan realistic in the light of the nation's problems, resources, and economic means.

The levels of production that the Chinese Communists hope or actually believe to be achievable over the 12-year period are not ascertainable. Before 1958, mention was being made of goals that would more than double total production with 1955 as a base. Official production estimates for 1958, if true, would bring these objectives near accomplishment. Although Free World observers believe that 1958 estimates were greatly exaggerated, the claimed increases suggest that 1967 production goals may be upped.

As a practical matter, stated long-term targets as announced by the regime have little real significance. There is no way of knowing whether targets represent concrete goals, expected to be achieved, or "fighting targets." There are good reasons to suspect that production goals will consistently be set higher than expected achievements. This would be consistent with the Communist practice of painting a bright future with a promise of an abundance in order to motivate the people in the face of austerity and hardships demanded for the present. Setting long-term goals that cannot be reached may also be calculated to assure maximum effort by workers and thus safeguard against any tendency to slow up, which might happen should targets be set that are attainable with less than maximum effort.

Long-term plans are broken down into 5-year plans which are more detailed with specific targets, investment plans, and objectives spelled out. China's First Five-Year Plan began in 1953 and ended in 1957, but phased into a Second Five-Year Plan to cover 1958-62, and a third such plan has

been indicated for the years 1963–67. Thus, the Third Five-Year Plan and the 12-Year Draft Agricultural Development Plan both are scheduled to end in 1967. The 5-year plans are basically a series of production drives.

Within the 5-year plans are the annual plans complete with production targets, improvement goals, an annual budget, and concrete plans for action. Actually, in practice, announced plans have not been firmly adhered to. Targets may be raised or lowered within the short period of a year in response to changing prospects.

## Production Policy

Free World appraisals agree that a strong agriculture is a prerequisite for building an industrial complex in China. The recognized facts that support such a conclusion are that 75 percent or more of the Chinese people live in the countryside; more than 50 percent of the raw materials used in industry come from agriculture; and agriculture has traditionally been the principal earner of essential foreign exchange—accounting for about 75 percent of total exports. Top Communist authorities readily concede that unless agriculture is improved and strengthened industrial development is not possible.

Yet, against this background the broad policy in economic planning adopted by the government provides that an overriding priority be given to developing heavy industry. In allocating state funds for investment purposes industrial projects are getting about 7 times the amount allocated to agriculture. Efforts to increase the production of steel, coal, electric power, machine tools with future wealth-producing capacities dominate the thinking of policymakers. Agriculture is most important as a means of achieving these industrial goals and, out of necessity, of providing minimum needs in food, shelter, and clothing. Officially it is denied that agriculture is relegated to a position of secondary importance. Simultaneous development for industry and agriculture is the stated official goal. By way of proof, officials explain that capital investment allocated for industrial uses is in many instances going into industries that support agriculture. Also, it is claimed large amounts of local funds, which do not show up in the state budget, are being invested in agriculture by peasant organizations. Besides, it is stated that agriculture is not in position to profit from large investments at present. There is some truth in the first two points, but the last point made is not reasonable in the light of the known deficiencies in agricultural supplies and equipment.

What the government is planning and hoping to accomplish in the short run and how are rather clear, although not pointedly spelled out. Chief emphasis in agricultural production is being put on labor-intensive methods with the maximum substitution of labor for capital. The other side of this coin is to hold domestic consumption to absolute minimum levels. Funds for essential investment capital needs accrue as the difference between pro-

duction and consumption. Only relatively small amounts of this investment capital are channeled back into agriculture.

This policy throws the bulk of the burden of providing investments for agricultural developments on local peasants and peasant organizations. The collectives or communes serve as a means of accruing local investment funds and channeling them into the desired uses.

This is an ambitious undertaking and the attractions of such a program for a regime in a hurry to reach major power status in industry are obvious. The alternative would have been to adopt a slower policy which puts emphasis first on a program to improve the food and fiber supply by way of strengthening the agriculture base and improving living standards, then to concentrate on an industrial expansion program. India followed the second alternative, in that its First Five-Year Plan stressed agriculture; the second emphasizes industry.

## Technological Improvements

Chinese agriculture undoubtedly has a reserve production potential if modern science and technology can be applied. Authorities in China are aware of this fact and have the usual great Communist faith in the power and usefulness of science in overcoming difficulties that stand in the way of increased production.

Announced government plans call for a broad, comprehensive agricultural development program in which every human and material resource available is to be used unsparingly in an effort to reach the desired objectives. Forty points are covered which touch on every sector of agriculture and rural life.

Broadly speaking, however, the government proposes to accomplish two major purposes in agriculture—namely, scientific and technological improvements and “social reform.” The scientific and technological improvements are officially described as intended to correct the weaknesses and overcome the backward state of agriculture, thus bringing China abreast of the most advanced countries in the world in the field of agricultural science and technology. By social reform the Chinese mean the destruction of the independent farmer as a major component part of the free enterprise system and the substitution of communalized farming under a framework of a communistic society.

Of these two objectives, the problem of increasing production is clearly embodied in concrete plans that come to grips with the causes which limit production, such as providing irrigation water and commercial fertilizers along with other good sound scientific practices and cultural methods of solving basic weaknesses in agriculture. The so-called social reforms are an important factor in production increases only as they act to speed up or slow down the pace at which fundamental scientific and technological reforms can be accomplished. Taking the technological improvement plans first, they call for broad, vigorous efforts directed at applying the findings

of science to a backward agriculture. However, major emphasis is directed toward the following areas of work:

*Water conservation.*—Droughts and floods are basic causes of Chinese agricultural problems. Plans for coping with them stress the digging of wells and ponds and the building of numerous irrigation canals and dams throughout the country. The harnessing of small rivers and water drainage and soil conservation work are to be carried out by local governments and peasant organizations. Large-scale water conservation projects are to be carried out by the state. The state also proposes to make available, within its means, mechanical equipment and power, such as water wheels and steam engines. The net effect would, according to plan, virtually eliminate all ordinary floods and droughts in 7 to 12 years beginning in 1956.

Efforts to expand irrigation and to decrease waterlogging continue on a high priority scale, but with initial emphasis on small and middle-sized projects. Chinese authorities claim to have brought several million hectares of land under irrigation in the period 1949-57.

Government sources were claiming that 59 percent of all cultivable land was under irrigation by the end of 1958. Plans announced for 1959 speak of increasing the percentage to more than 80 percent. The exact number of hectares under irrigation and the number the Communist regime has added are not known to the Free World. Official claims are often contradictory and terms are not defined, so that it is never clear what is being counted as irrigated land. Certainly in view of the difficulties that neighboring countries have been having in increasing irrigation, it is incredible that China could race ahead, all of a sudden, especially when the major part of the work is to be done by human labor using, mainly, simple hand tools.

It is significant that the government concentrated first on constructing small projects that are less expensive and easy to build and show quick results. This is the type of work that the peasants can handle themselves, using primarily local manpower and material. The state provides the incentive and technical assistance. The regime can legitimately attribute much of its claimed success to its organization of peasants, for this provides pooled manpower, unified management, and local financial resources. Also, collectivizing and communalizing removed a limitation imposed by having an area owned by many small farmers, for irrigation projects often require large land areas and a canal system.

It does seem probable that the Chinese have made rapid progress in improving and expanding small-scale irrigation developments and in reducing waterlogging. But the opportunities for this small-scale type of project are not inexhaustible. The ambitious goals outlined call for eventual developments along the major rivers, such as the Yangtze and the Yellow.

Construction of such major projects will be costly in money and scarce materials; complicated engineering problems must be solved; and the investments will, at first, pay off slowly. This type of development requires expenditures of production factors that the Chinese economy can ill afford. It

is likely that part of the reason for forming the large communes was to create local organizations capable of undertaking bigger and more complicated projects.

The economic benefits are manifestly multiple and highly promising, and the stakes are high. Such construction, if successful, will at once aid in land reclamation, increase and stabilize crop production by providing flood control and more irrigation, improve water transportation and fishing, and provide a badly needed new source of power for China's growing industries. Clearly there is the strongest kind of economic incentive for the Chinese to bend every effort to push ahead with such multipurpose developments. This, they claim to be doing, assisted by the Soviet Union's engineers, and using Russian techniques and equipment.

Extensive water control and development plans have been reportedly worked out for harnessing China's numerous rivers. Apparently, the grid of dams and water control system planned for the Sanmen Gorge area on the Yellow River will be emphasized during the Second Five-Year Plan.

According to official announcements, work was started in April 1957 on the first and largest of some 46 dams planned for the area. This undertaking is being heralded as one of the largest in the world—designed to control floods along the river, to provide irrigation for vast land areas totaling more than 18 million acres, to generate 1.1 million kilowatts of electric power, and to greatly improve the Yellow River as a transportation artery.

The project was started with a great deal of fanfare and apparently work is continuing. However, necessary economy measures may at any time force a shift in emphasis to water and erosion control on the watershed areas. Again, this latter type of work is not expensive and can be done by human labor with local resources. Postponing the heavy and expensive construction would be a concession to periodic economic strains that characterize the Chinese economy and points up the country's industrial weakness. It is also indicative of how long it is likely to take China to develop this and similar major development projects. Undoubtedly, the regime's expectations for greatly increased agricultural production are based in large part on an assumption that this type of work can be successfully carried out according to plan.

*Chemical fertilizers.*—Building a strong domestic fertilizer industry has become a major priority goal for the Second Five-Year Plan, which ends in 1962. In conjunction with an announced plan to increase investments going into industries supporting agriculture, the government has called for a much more rapid expansion in the chemical industry, especially fertilizers. New targets call for annual production of chemical fertilizers to reach 6 to 7 million tons by 1962 and 15 million tons by 1967. The earlier target set for 1962 called for only 3 million to 3.2 million metric tons, and may be compared with the annual production of less than 1 million tons in 1957.

The 1957 production of fertilizer was reportedly supplemented enough by imports to bring the total available up to 1 $\frac{3}{4}$  million tons—only a small fraction of total requirements, which conservative prewar estimates put at

15 million tons. Perhaps 20–25 million tons would be a more accurate statement of the present need.

Chinese Communist claims in chemical fertilizer production have been modest. And since nitrogenous fertilizer especially is a key factor in production, this is one of the considerations that raises so much doubt concerning the reliability of the claimed production increase in 1958.

The Chinese have historically relied on the use of night soil, stable manure, pond mud, green manure, and oilcakes to maintain soil fertility. However, more than 40 centuries of growing crops plus heavy erosion have taken out much of the soil fertility. Replenishing and rebuilding depleted soils will require large quantities of chemical fertilizers, in addition to the usual source of Chinese fertilizers. Also intensifying the use of land by multiple cropping and closer planting, taken as a major means of increasing production, will increase the need for heavy application of fertilizers to keep soils producing at a high level.

Prewar experience indicates that chemical fertilizers, particularly ammonium sulfate, properly used will increase crop production by as much as 25 percent in China where water is not a limiting factor. Experience in other countries where increasing the use of fertilizer has stepped up production markedly points up the crucial importance of fertilizer to the Chinese agricultural programs. Rapid strides in increasing fertilizer applications, coupled with adequate water supply and control, could undoubtedly materially increase production—other factors being favorable. In Japan, for example, advanced cultural methods and liberal amounts of fertilizers are producing 4,000 pounds of paddy rice per acre. In China yields were 2,300 pounds prior to 1958.

The crucial question is: Can the supply be significantly increased? Probably it can be, if authorities concentrate on the task, but not nearly to the extent planned, at least in the foreseeable future. Construction work on fertilizer plants started in the First Five-Year Plan is now being completed. This will add to productive capacity, but further addition would divert resources from priority projects in heavy industry. In 1957 the regime appeared to be reconciled to making some such move to bolster lagging agricultural production. Even so, it would appear most unlikely that production would reach 15 million tons by 1967.

During 1958 the government began a drive to alleviate the fertilizer supply situation by a campaign to promote small-scale home production units along the lines of those employed to up steel production. The technical difficulties involved in handling and manufacturing chemical fertilizers locally in thousands of small plants would appear to be beyond the abilities of local groups working with improvised equipment. Notwithstanding such difficulties, the regime has adopted such a program and may very well go forward with it so long as there is any gain to be realized.

Also, the government claims to be going forward with research on how to use fertilizers most effectively. Even though the regime can bring pres-

sures on the collectives to use fertilizers in the amount and manner directed once supplies are available, the problems of how to apply fertilizers to get maximum benefits and how to transport them to the farm must be considered.

*Mechanization of farming.*—As emphasis and increased investment have shifted toward increasing fertilizer supplies, they have shifted markedly away from mechanization of farming; this suggests some substitution of one for the other in the immediate future. The Chinese Communists, like the Russians, are fascinated by the promising benefits of large-scale mechanized farming, as used so successfully in the United States. Ostensibly, much of the justification cited for collectivized or communalized farming is based on the eventual substitution of machine power and mechanized farming for the small-scale peasant-type operations. Also, the tractor station arrangement, used in the Soviet Union for many years, can serve the government as an important control device for keeping peasants in line.

However, the Chinese Communists have taken a gradual approach toward mechanization from the first, in that original plans called for only 10 percent of agricultural land to be farmed by power machinery by 1962, and even this modest goal is receding farther into the future. The reasons are rather obvious. Chinese industry does not have the present capacity to meet these demands; the farm machinery industry has only made a small start at producing tractors. Foreign exchange is admittedly not available for large imports. Human labor is China's most plentiful resource and, with the low prevailing wage rate, costs of production in machine farming could well exceed the cost of using this inexpensive labor. Moreover, until very recently unemployment has been a troublesome domestic problem. Industry has not been able to absorb the numbers of unskilled laborers that flock to cities seeking better paying jobs and easier living. This labor force grows larger every year. Freeing more workers from agriculture only intensifies the unemployment problem. Current efforts are to get people back on the land, and the recently initiated commune system is a major attempt to put everyone to work. Apparently, it has succeeded. Now the government complains of a labor shortage.

In addition, operating machinery presents many technical and supply problems in maintenance, spare parts, petroleum supply, and technicians. Fuel to power machinery is particularly a difficult problem. Petroleum development is admittedly lagging, although it is claimed that important oil fields have been discovered and are being developed in northwest and southwest China.

From a longer-term point of view, farm machinery could make a contribution in cultivating and harvesting crops on the dry level plains, especially in north China. But on the hillsides where terrace cultivation is practiced and in the south and east where wet paddy fields predominate, heavy machinery will be of only limited use.

Meanwhile, the Chinese are using such machinery as they have for special purposes, such as land reclamation by state farms, and are also reportedly

paying increasing attention to the need for acquiring equipment suited to Chinese conditions and using local fuels. And it has been made clear that human workers and draft animals will provide farm power for years, and for many parts of China will likely predominate indefinitely.

*Plant breeding.*—Nationalist China had already made considerable progress in plant breeding before it lost control of the Mainland. Important new varieties of cotton, wheat, rice, and tobacco had been produced, which gave 10 to 20 percent larger yields. Promising research and experimental work had been carried out on soybeans, millet, kaoliang, and potatoes. Thus, the Communists came into possession of a considerable store of technical information and a sizable body of trained research workers.

Development, multiplication, and distribution of selected and improved seeds are reportedly receiving high priority. The government appears to be aware of the fact that a field of opportunity is open for improving the nation's supply of food and fiber by developing crops which are quick maturing, larger yielding, more resistant to prevalent diseases, insects, and unfavorable environmental conditions.

The official approach to the problem leans heavily on the agricultural collectives plus the supply and marketing cooperatives (now communes) for multiplication and distribution of improved seeds. The steps followed prior to 1958 were for the Research Institute and the state experimental farms to develop improved seeds; selected state and cooperative farms to multiply them on a large scale; and the supply and marketing societies to distribute them. This procedure may have been modified since the 1958 reorganization. Since the organizations involved are state controlled, the adoption of improved seeds, like that of fertilizer, can be made mandatory, and thus speeded.

*Insects and diseases.*—The government has given a great deal of attention to the control of insects, pests, and plant diseases. Peasants have been organized into brigades using simple and inefficient methods, but making lavish use of human resources.

Prewar losses from insects, disease, destructive birds, and small animals were serious. Estimates of damage from insects alone put the loss at 12 million tons of cereals each year. Since control measures had not been widely adopted and since storage facilities are poor, the total losses from insects, diseases, rats, and birds would be enormous. This situation again provides an opportunity for increasing agricultural supplies materially.

And most of these difficulties can be controlled by use of known scientific measures. A high degree of success would require additional research, large quantities of cheap, dependable insecticides and fungicides, equipment for applying the materials on a massive scale, and a program of instruction on using the control measures effectively. China has neither the chemical supplies nor the equipment in sufficient quantity. Some of both are imported, but an adequate supply must—like so many other necessities—wait for development of domestic industry.

*Intensifying use of land.*—A great deal of emphasis is being placed on such measures as multiple cropping, close planting, and deep plowing. Except for deep plowing these practices have been extensively used for many years. Deep plowing is being widely adopted. Further extension of multiple cropping and close planting would appear to be at an increasing risk of failure, but if coupled with expanded irrigation, improved soil fertility, high-yielding varieties of seed, and other modern cultural methods the promise of more production makes the chances well worth taking. And combining all these measures to raise per acre yields offers the best opportunity open to increasing total production. And as a practical matter, the need for greater production is so compelling that not even the smallest opportunity can be left unexploited.

*Livestock improvement.*—As in the case of crops, the Chinese authorities are undertaking a program to increase the numbers and improve the quality of livestock. Emphasis is put on upgrading breeding stock, improving nutrition, and combating disease epidemics which take heavy tolls of the livestock population annually.

On the disease problem, there is reportedly considerable research being done; veterinarians are being trained and efforts are being made to provide modern medicines. Also, animal sanitation is emphasized. But there is no information as to progress being made toward providing these needed services and supplies, and the quality of work is unknown. It seems unlikely that the Chinese would have effected any large advances in the field of veterinary medicine in the short time available.

Actually, the Communist regime has shown little understanding and little ability to cope with practical livestock problems. Even though a strong livestock industry is necessary to the Chinese economy as a source of animal power, meat, manure, raw materials for industry, and commodities for export, the Communists have hampered its growth. The government has failed to leave enough feed in the countryside after it takes its share in taxes and purchase quotas. Also, its pricing policies favor grain and fiber crops, and above all it took the care and management of livestock out of the hands of individual peasants. On the last point it is being discovered belatedly that animals which belong to everybody in the collective actually belong to nobody. Peasants are officially criticized for refusing to show the necessary sense of responsibility for taking proper care of the animals belonging to collectives. Moreover, the intermingling of animals on collective farms complicates the control problems of communicable diseases.

Meanwhile, the lagging livestock industry has been the object of much high-level concern. In an attempt to rejuvenate the industry, the authorities have given slight price inducements and tightened controls.

*State aids to agriculture.*—In general the state throws the big share of the burden of increasing agricultural production on the peasant villages, and in the final analysis by virtue of their numbers the peasants pay most of the total national bill. Yet, in a further attempt to foster production, the state has taken the lead in providing credit facilities, making the necessary requi-

sites of production supplies available to some extent, and constructing a network of highways and railroads to facilitate movement of agricultural supplies and farm products.

This type of work meets a long-recognized need for improvement in these areas as a support to agriculture. Lack of adequate production credit at reasonable rates of interest, inadequate transport facilities, and shortages of farm supplies seriously hampered prewar Chinese production and marketing. Inadequate transport facilities often permitted the paradoxical situation of having famine in one area of China and surplus food in others at the same time. The Chinese appear to have made progress in improving these conditions, especially in agricultural credit and roadbuilding.

Except for credit, providing necessary farm supplies and equipment and building railroads having the essential transport equipment are again largely dependent on developing domestic industry. It is in this frame of reference that the Communists contend that developing agriculture and industry simultaneously is a correct policy, that the two are mutually compatible and mutually reenforcing. Also they contend, with some justification, that the ratio shown in the state budget of more than 7 to 1 between investments allocated to industrial development and those to agriculture during the First Five-Year Plan is not nearly so wide as it seems when expenditure in industries to support agriculture, state loans to agriculture, and the contribution of the peasants themselves are considered.

*Research and extension.*—The Chinese Communists are reportedly pushing education, research, and a broad extension program in agricultural sciences. Their efforts along these lines are aided by a body of professional people, many of whom were trained in Western schools, as well as the research done earlier by the Nationalist Chinese. In addition, farm delegations from China are visiting other countries and have shown a growing interest in Japanese farming methods.

The Chinese Communists have attacked the extension phase of disseminating new techniques by setting up demonstration teams throughout the country staffed or supervised by the party cadres. They are also counting heavily on communalization of agriculture, with each commune having demonstration plots, teams of technicians, and centralized management. Communalized farming lends itself to high-pressure tactics that can probably force peasants to go along in adopting measures promoted by state authorities. But it can multiply mistakes as well as beneficial techniques. The tendency has been to force the adoption of a practice whether it fits or not, which as anyone familiar with agriculture knows can lead to grief when local conditions differ so widely as in China.

In pursuing the foregoing objectives, the Communists are not deterred by the social cost of their programs. The catch to the regime's plan of trying to do so much so fast is whether plans and programs are physically possible, especially whether the peasants can measure up to the enormous demands imposed on them without more capital investment to provide mod-

ern equipment and a more adequate supply of production requisites. Significantly, the regime must find a solution to the two-sided problem of increasing agricultural production and at the same time enforcing a strict austerity program. Neither half of this problem is easy. The Communists hope to meet this problem by thorough regimentation and strict discipline, and in the same stroke, to bring economic and social structural changes.

## Peasant Organization

Along with scientific and technological improvements, the Chinese Communists have a second broad purpose or guide in planning and implementing agricultural development programs—namely, so-called social reforms. In the Communist vocabulary, “social reforms” mean, among other things, the complete destruction of the free, independent farmer. More recently, the closely knit Chinese family unit, as such, has been under attack. The process is captioned under the term “collectivization,” which phased into “communalization” in 1958. These serve a multipurpose role and are vital to what the regime is trying to do in many respects.

The pertinent part of the program for increasing yields, of course, concerns scientific and technological improvements. Nevertheless, collectivization, now developing into communalization, enters the picture of increasing production and must be considered for any possible contribution; but more important, it must be weighed as a counterproductive force in the outlook for agricultural development.

Regimentation of peasants in other countries has proved incompatible with a productive agricultural economy; the heavy-handed methods used, the lack of material reward based firmly on effort, and the sacrifices demanded of peasants throttle individual initiative and arouse antagonisms. Significantly, the regime is relying on the peasant to provide the bulk of the raw materials, finance, and labor required to make possible the things proposed in the area of scientific and technological improvements. Reasonable success in the long run requires that the government have some measure of cooperation and participation.

*Alleged advantages of communes.*—Even though force is the cement that holds the country together, the Communists know that relying on force alone has its dangers and limitations. Thus, the regime has spent and still is spending a great deal of money and energy in an effort to convince the peasants and the country that communalized farming is a necessary step for national improvement and, in fact, superior to the independent peasant type. The regime employs promises, tight organization, and the firm control of news mediums in a never-ending propaganda campaign to accentuate what it claims to be the positive and popular appeals of its own policy. The treatment given the free enterprise economy is the reverse of this, in that only the problems—real and alleged—are emphasized and the positive side is suppressed or distorted.

In an attempt to smooth the way for acceptance of the regime’s series of

reforms in agriculture, the authorities insist that Communist methods are superior to the free enterprise system. Their reasons are these:

1. The larger units created under their system permit the use of machinery and make possible large-scale economies.
2. Improved seeds, fertilizers, supplies, production credit, and other requisites can be more easily made available when needed.
3. Improved technology and the results of research can be put into widespread use in much shorter time simply through state directives.
4. Peasant organizations, by pooling their financial and labor resources, can undertake local projects to reclaim land, control floods, build irrigation dams, and do other construction work that the individual could not do alone.
5. Irrigation projects can more easily be developed when farms are pooled and handled as one area.
6. Housewives are relieved of household duties for full-time work in the fields and factories.

In the main, China organized the peasants, and has steadily tightened that organization, for political and control purposes. In a political sense, China has followed the Soviet Union's example in all important respects except for minor deviations to fit Chinese conditions, up to the commune stage, when China went a step further. Both the Soviet Union and China destroyed the free enterprise system—a step considered essential for making sure that a Communist society will prevail.

Similarly, as a control device, the Chinese authorities saw demonstrated in the Soviet Union the multiple advantages, in fact the absolute necessity, of having the population organized into groups and staffed by people willing to obey orders. Otherwise, a centralized totalitarian government could not hope to issue directives from a central location with any assurance that instructions would ever be carried out at the working level. Organization, Communist style, provides a ready means of reaching peasants with instructions and commanding disciplined effort to carry out orders. Also, the same channels serve to provide the central government with intelligence on what the people are doing. The Chinese learned from the Soviet Union that for more than 40 years collectives have been an effective control apparatus even though a disappointment as a means of increasing agricultural production.

As a matter of fact, after organization, the management of the units formed is no less than an arm of the state serving to assign every peasant a task and, more important, applying pressure to see that the assignment is carried out.

Peasant organizations, used in this way, become a convenient device for mobilizing and pushing the entire labor force to do such important jobs as reclaiming small plots of land, digging ponds, wells, and irrigation ditches, building irrigation dams, combating insects, and building roads. And since much of this work is carried on during the off-season from farming, it is officially regarded as additional work in that it would not otherwise be done or would not be done on a comparable scale.

Also, the peasant organizations can help with the state's difficult problem of getting control of agricultural products. The peasants naturally do not like to sell their products at the low prices fixed by the state, especially supplies that they need for their own use or that would bring a higher price in a free market. But the state's economic plan relies on paying the peasants a low price. This has given rise to one of the most complex problems confronting the authorities. By working through the organization, the state requires that its purchases be given first priority with the collectives or communes holding whatever is left for local investments in agriculture and for division among the members. In a collective of several hundred peasants, hiding supplies is more unlikely than on a private farm, and more dangerous to the individual.

In addition, organization also makes tax collection easier. Then too, the management can be required to take the lead in the numerous drives that are continuously being carried out, such as austerity campaigns, fund raising drives, and production campaigns. Also, the programs for political indoctrination, adult education, and any other activities requiring grouping for communication purposes can be conducted by working through the organization.

The question of how the Chinese peasant will take to the unending oppression is the big uncertain factor that, more than any other force in the long run, will decide the fate of Communist China's programs and plans.

*Land reform.*—During the revolutionary period, the Chinese Communists bid for peasant support by talking of land reform. Hopeful peasants provided the bulk of the men and materials the Communists used to overthrow the Nationalist Government.

The pattern of events that has followed since the Communists took over the Mainland suggests that they guided and set the pace by ear, pushing ahead vigorously when conditions looked opportune, then slowing the pressure when the situation became threatening.

There were—and still are—two obvious restraints at work, and probably a third. First, the government was concerned about the possibility that a drastic and adventuresome policy, if pushed too fast, would dangerously dislocate production. This accounted for its willingness to tolerate a little free enterprise temporarily. The rich peasants particularly got a brief respite because of their position as effective producers of the food and fiber that the country had to have.

Second, the government has no way of knowing how far the people's rights and privileges can be encroached upon without a political upheaval. And, third, it is quite probable that the shortage of technically trained, politically reliable personnel has acted as a check.

The overall plan of collectivization has evolved through four stages and has now entered the fifth. Land reform, carried out during the first 3 years of Communist rule, was the first stage, preparing the way for the final step that turned the Chinese farmer into a wage earner.

In this phase of the development, the peasant population of China was arbitrarily divided into four classes—landlords, rich peasants, middle peasants, and poor peasants. These classes were defined by the Communists as follows:

A landlord is a person who maintains himself exclusively by exploitation. Feudal exploitation of land is further explained as receiving benefits from land in the form of rents by a person not himself engaged in essential labor, as distinguished from mere supplementary labor. Essential labor means taking part in the actual process of production for a definite period of time. A rich peasant is one who engages himself in essential labor but derives a portion of his income from exploitation which exceeds 25 percent of the total annual income of his family. A middle peasant is a self-cultivation owner who does not employ outside labor nor sell his labor power. This category also includes tenants. The poor peasants own indifferent land and implements and have to obtain land on rent and also sell their labor.

As a first step, the land and other property of farmers falling into the landlord class, and to some extent the rich peasant class, were seized and distributed among the poorer peasants. An element of the rich peasant class was tolerated for a time for economic reasons, then eliminated as an economic entity. Later, essentially the same confiscatory treatment was applied to the middle and lower-class peasants by forcing these groups to surrender their property to collective ownership. Initially, however, the Communist Government had appeared to make common cause with the poorer peasants and had favored them so long as they were useful allies in wiping out the landlord class. But the middle and poor peasant classes who took part in eliminating the landlord class and who profited for a short time probably were not looking beyond the immediate prospect of getting some of their neighbors' wealth.

From the government's point of view, land reform accomplished several planned objectives: First, by carrying out land reforms, the regime at once struck a heavy blow at the free enterprise system and liquidated a class of people that would have been most stubborn and difficult to subjugate. Secondly, poor peasants were implicated in wiping out the landlords. As a result, they came to fear punishment should the previous government regain power. Thirdly, and most important, land reform, with the liquidation of the landlord class, set an awesome example of what could be expected to happen to any individual who dared to stand in the way of the state in carrying out state plans. This created a fear complex that still helps the Communists push across their programs. Fourth, the process had the effect of helping the regime identify local people who would be useful as leaders and may have had as a side purpose the objective of giving poor peasants a sense of participating and a feeling of importance and power.

*Mutual aid teams.*—The Chinese peasants hoped, and probably were not discouraged from assuming the popular belief, that after land reform, the newly acquired land would be theirs to farm in the traditional Chinese man-

ner; the government itself even referred to the zeal for work and the positive effects on production following these reforms. Yet even before land reform was completed, measures were being taken to discredit the new situation.

In each step toward communalization, the policy was to praise the next step until that step had been taken, then to discredit the newly acquired level while calling for the next move. Following this pattern, the government then led the drive for the formation of mutual aid teams, claiming that the small peasant economy, with fragmentary holdings of land, was inadequate to meet the nation's increasing needs. Ironically, the recent land reform had greatly intensified the parcelization problem.

The mutual aid team concept was not new to the Chinese countryside. The practice of pooling labor during the busy season had a long history in many areas of China. Under the Communist plan, peasants were permitted to keep title to their land and tools and to receive the produce after paying for assistance received from other members. Labor, however, came under unified management. And this permitted the state to muster a vast supply of organized peasant labor for use in an ambitious reconstruction and building program. Providing regimented labor is a key function of peasant organizations and is one reason why they are so useful to the state.

*Producers' cooperatives.*—The Communist Government soon began to push for the next stage, the so-called producers' cooperatives. This called for pooling all land, major farm equipment, and livestock. The peasant retained only a hut and a small plot of land for a garden. The title to land was also theoretically held by the peasant. The owner received or was promised a fixed-interest payment as compensation for pooling his resources.

In practice, prices set were often confiscatory, and many peasants were not paid even the small price promised for their land, farm equipment, and livestock. The Communists consider such payments as "exploitation," and it was to be expected that they would be dispensed with as soon as conditions permitted.

Producers' cooperatives were actually the key stage in the overall plan to collectivize agriculture. These cooperatives were often enlarged by taking in adjacent areas or by combining small organizations, or both, so that going from producer cooperatives to full collectives was not difficult.

*Collectives.*—Based on the Soviet Union's experience, the collectives seemed to be the pinnacle to which other steps had been pointing, and that the movement would pause there for perhaps several years seemed likely. But subsequent developments have proved that this was not to be the case. In the collective stage, the pretense of compensating the farmers was dropped. Their property, except for essentially personal belongings, became the property of the collective, its use controlled by the state.

Thus, the actual mechanization of collectivizing and finally communalizing agriculture showed a studied master plan carefully worked out and forcefully executed. Each step paved the way and phased into the next step until the peasant ended as essentially a mere wage earner.

*Communes.*—When, in 1958, the Chinese Communists decided that agricultural collectives were unsatisfactory and should be immediately amalgamated into a much fewer number of communes, Free World observers were surprised by the suddenness and adventuresome nature of the move. Actually, what China is undertaking is consistent with the long-term objectives, at least in theory, of all Communist countries, but China is attempting to translate theory quickly into reality.

Already more than 90 percent of the population has been organized into 23,384 communes. Undoubtedly, most of this organization is primarily on paper, with the bulk of physical changes to follow over the next several years. Since the communes are formed by merging existing collectives, reorganization on paper would be easy enough, but the communes provide for drastic reorganization of the social, political, and economic structure. This will take time.

The communes provide for the most rigid regimentation ever conceived in history. If successful, the commune will become the local center of political and economic power. It will, as planned, replace the family circle. It will form the basic structure of the promised pure communistic society. Under the system, each commune is to provide community kitchens, public bathhouses, tailor shops, barber shops, homes for the aged, children's nurseries. Fragmenting and destroying the family unit was, in the eyes of the Communists, one of the cardinal objectives in deciding to adopt the commune system. This step, like the destruction of the free enterprise system, the regime apparently considers necessary before the Communist society can be completely successful in China where so many of the long-established social customs have the family as the central unit.

As a parallel economic measure, the government hopes to accomplish more rigid control and greater exploitation of human and material resources. First, the entire population is organized along military lines. Such a military setup is not only a mechanism for ordering people to undertake an assignment but also a way to get them on the job early and keep them late and to quicken the pace for carrying out a task.

Second, the common messhall permits the government to control the use of food and supplies. By not permitting the individual peasants to harbor food supplies, it makes holding out unauthorized quantities more difficult and more dangerous in that the peasant, if caught, has no excuse for having any supplies on hand.

Third, the government hopes and is apparently able to shift labor about over wider geographic areas and between industry and agriculture if the individual has few personal belongings or attachments. These are a few of the ways in which the Communists hope to advance their objectives by adopting the commune system.

The effects have been to strip the peasant of his last remaining personal belongings. According to reports from the Mainland by Free World observers, the communes, at least initially, have brought forth a great work effort. Thus, the regime was successful in gaining, temporarily at least,

fuller exploitation of the human labor force as intended, but certainly at a cost in increasing tensions and dissatisfaction among the people. Recent reports indicate that the government has found it necessary to call for a slight pause and a consolidation period in the commune development. This is not inconsistent with the Communists' past performances, and it would not be surprising for the pressure to be put on again at any time.

## Production Trends

When the Communists took over in 1949, the Mainland Chinese economy was virtually exhausted after a decade of foreign and civil war. Farmers were disorganized and discouraged. Production was low. Once order was reestablished, inflation checked, and the hard-working peasants given an opportunity to rebuild, recovery was to be expected.

Agricultural production apparently recovered at a fairly rapid rate. Official releases reported that, on an overall basis, production was back to prewar levels by 1952, although some enterprises were admittedly lagging behind—and still are, for that matter. However, since land reform took place during this period, largely eliminating many of the most effective agricultural producers, it seems highly unlikely that 1952 production equaled the average prewar levels for the years 1931–37, not to mention the best year of the prewar period, although 1952 was a good crop year on the Mainland from the highly important weather standpoint.

The year 1952, marking the beginning of the First Five-Year Plan, is often used as a base year in official statistics discussing the plan. But there is doubt as to the factual justification for considering 1952 production as equal to or greater than prewar production levels for the 1931–37 period, as official claims often imply.

The year 1949 is also used as a base year, but this is done when the regime wishes to cast a most favorable light upon its accomplishments. This statistical treatment is misleading because production in 1949 was disrupted and far below normal.

## Beginning of the 5-Year Plans

The content and detail of the First Five-Year Plan, 1952–57, were not made public until about 1955. The plan called for a 23.7-percent increase in agricultural production, using 1952 as a base year. Official statements claim that these targets were reached on an overall basis.

But it is officially admitted that several crops failed to reach targets—potatoes, soybeans, jute and kenaf, flue-cured tobacco, sugarcane and sugar beets, and silk. To these can be added the several livestock enterprises, which have been a keen disappointment to the authorities.

The results achieved reflect government policy of emphasizing grains, especially high-yielding grains, and the industrial crops by artificially establishing favorable price ratios and using other means to stimulate production in

TABLE 1.—Balance sheet: Communist China's First Five-Year Plan, 1952–57

Crops reported	Production		1957 production as a per- cent of target
	Target for 1957	Reported for 1957	
Total food grains (excluding soybeans).....	1,000 <i>metric tons</i>	1,000 <i>metric tons</i>	<i>Percent</i>
Rice .....	181,590	185,000	101.9
Wheat .....	81,770	86,378	105.6
Miscellaneous grains .....	23,725	23,600	99.5
Potatoes .....	54,795	( <sup>1</sup> )	.....
Soybeans .....	21,300	20,293	95.3
Cotton .....	11,220	10,000	89.1
Jute and kenaf .....	1,635	1,640	100.3
Tobacco (flue-cured) .....	365	308	84.4
Sugarcane .....	390	299	76.7
Sugar beets .....	13,175	10,201	77.4
Silk .....	2,135	1,841	86.2
Tea .....	155	113	72.9
Rapeseed .....	112	113	100.9
	( <sup>1</sup> )	863	.....

<sup>1</sup> Not available.

Official statistical releases of Chinese Communist authorities. This table is presented for public information and not as the views of the U.S. Department of Agriculture.

enterprises most useful to the state. This diverted resources away from such enterprises as livestock production and oilseeds, which declined. Alarmed at the effects of their policy, the authorities in 1957 undertook to rejuvenate lagging enterprises by various measures.

The First Five-Year Plan had begun on a note of high optimism and ended in 1957 on a note of alarm and uncertainty. The official response to the difficulties that had slowed the pace in 1957 was drastic and energetic. Adopting the slogan of making 1958 the year of "the great leap forward," the regime brought to bear on the problem a massive human effort. People from every walk of life were pressed into service. The targeted pace in other sectors of the economy was also stepped up, which highlights a fundamental approach characterizing the Chinese economic development techniques, namely, the policy of trying to restore balance in the economy by putting greater effort—largely human labor—into weak spots without slowing down in some other place. This has not always worked. The regime has had to slow down for retrenchment after years of feverish activity.

The exact level of accomplishments for 1958 has not been determined. Preliminary official reports from Communist China state that crop produc-

tion increases that year were about double the 35-percent increase in overall agricultural production called for in the Second Five-Year Plan (1958-62). Free World observers do not think the claimed results possible.

Indications are, however, that during 1958 China did have one of its better crop years, with possibly large increases above the 2 previous years' production of some crops. Weather conditions throughout the Far East, except for parts of India, were generally favorable. Also, the Chinese peasants and others were required to make a desperate effort during the winter of 1957-58 and the spring of 1958 to increase the supply of home-made fertilizers and to expand and improve irrigation facilities. These efforts, together with such other measures as the increased use of selected seeds, closer planting, deeper plowing, and more multiple cropping, may well have combined with relatively good growing weather to increase yields per acre rather substantially. More time, information, and analysis will have to be brought to bear before any reasonably accurate judgment can be made as to the actual levels of production achieved.

## Production Increases in Perspective

For political purposes Communist China has given widespread publicity to its accomplishments in agriculture. Efforts in this respect are intended to persuade the Chinese people and neighboring countries that the Communist system is more effective in increasing production than the free enterprise system as practiced by India and others. Claims for 1958 suggest this as a motive, since statements that crop production nearly doubled were not reflected in any general easing of rationing or in great increases in exports.

In considering China's claimed achievements before 1958 even if the 23.7-percent increase is accepted as approximately correct, it should be recalled that Free World countries have also made steady progress in increasing production during the period since the end of World War II. India, for example, with a weaker agricultural base than China, increased agricultural production 19 percent during its First Five-Year Plan (1952-56) and without "putting the people through the wringer" as the Chinese have done.

Despite some gain in agricultural production, shortages of farm products have been a constant source of anxiety for the Chinese leadership throughout much of the period and especially during years of poor harvests. Significantly, the regime has been lucky in not having 2 consecutive years of disaster in the form of drought, floods, and typhoons. This has gone a long way in helping to ward off a threatening situation in years of poor harvest, such as 1954 and 1956. The pattern has been roughly a short crop followed by a mediocre year and then a good harvest. The years 1952, 1955, and 1958 have brought relatively good harvests and in each case the government was under stress.

Furthermore, in putting Chinese production in proper perspective, it is necessary to set production changes against a background of rapidly grow-

ing demand. The real crux of the question is not whether production can be slowly and laboriously expanded but whether it can outdistance demand.

In this respect population size and growth are major factors, as is clearly shown by a 1953 census enumeration which projects population at more than 600 million people and rate of increase at 2.2 percent annually. This adds about 13 million mouths to be fed every year, but various demands other than for food are being made on farm output. Increasing industrial capacity in light industry requires more technical crops. Also, more foreign exchange is needed for importing industrial equipment, expanding further the need for more exports of farm products. Moreover, any increase in consumer purchasing power generates new domestic demand and with short supplies creates difficult inflationary pressures.

The Communist leadership has on occasion admitted that China would have to face up to the problem of restricting population growth. Before 1958, measures were being initiated for this purpose. But with a new fervor for Communist orthodoxy sweeping the country during 1958 the regime again, at least in public, stoutly denied that overpopulation constituted any problems for a Communist society. It would not be at all surprising, however, to see the government pushing ahead with birth control measures disguised under some other objective, such as protecting the mother's health. Many observers believe that official concern about the population and food problem may have helped influence the government to take the risk of organizing the communes. By breaking up families, it is reasoned, the authorities may well hope to slow down the birth rate, thereby achieving the desired effect without having to admit that Communist countries also have population problems.

## Production Outlook

With the commune system in full swing the Chinese countryside is in such a state of flux that it is impossible to foresee what turn events will take. In speculating as to the likely trend in agricultural production a few observations can be made concerning the factors and influences at work, which will largely determine the outcome.

On the fundamental question of agricultural resources in terms of cultivable area, the limitations imposed by topography, climate, and soil are such that no large increases are economically feasible. The most important recourse open to China is to grow more crops and livestock per acre of land already under cultivation. Opportunities for this are reasonably promising, since Chinese agriculture has not advanced very far in adopting modern practices.

The pertinent question is, can the regime bring about the production of materials and equipment needed, provide the leadership, and exploit the opportunities? This is the heart of the outlook question and introduces the second major factor to be considered—that is, the history and appraisal of Communist methods when applied to agriculture. Several facts stand out to be weighed.

First, the prime mover in getting things done in Communist China is the strong centralized government. In the long run, coercion is shown by history to be an unreliable means of motivating farm people to achieve a high level of agricultural production. Consequently, agriculture has proved to be the weakest sector in the economy of every Communist area.

Secondly, the Communist approach is to assign first priority to industrial development, which starves the agricultural sector for investment capital. In China, the attempt is being made to substitute labor for capital on a massive scale. Such a substitution can only be done within limits.

Thirdly, and most important, the system in principle openly proposes to sacrifice the welfare and energy of the present generation to achieve political and economic objectives for some indefinite future. Getting the peasants to accept this role, forcefully imposed on them, confronts the government with a most difficult problem.

However, Communist governments have effected a counterbalance in the form of several skills which have been perfected to possibly an unprecedented degree. Among these are (1) Organization for control purposes, (2) effective use of every conceivable form of propaganda, and (3) anticipating opposition and liquidating it. These techniques have enabled the regime to weather almost a decade of great difficulty without being overwhelmed by problems that have existed on every hand. Agriculture has been one of the most difficult and there is no easing in sight.

For the short-range outlook, it is certain that agricultural problems will continue to be a major stumbling block. Unless population growth is checked, the government will be hard pressed at best to stay even with demands and to provide for exports. In the long run without a check on population, China may well run out of food and fiber, for its population could reach 1 billion people by 1980. This could make China a net importer of food before it reaches major industrial status. The prospects of this happening would appear ominous enough to force the government into bending the current Communist position on the population problem.

Meanwhile, increases in production above minimum needs are more likely to be exported or put into reserve stock than to be used for increasing rations for the population by any substantial amount.

## Foreign Trade

The forces that influence and shape Communist China's foreign trade policy are national in scope and political and diplomatic as well as economic in content and purpose. In fact, China's trade is so intermeshed with national diplomacy that the issues and objectives of trade take on more significance than those in countries where trade is carried on by private individuals and groups.

In practice, state trading by Communist China confronts individuals, private trading concerns, and their governments with competitive problems that are difficult for private groups alone to counter. Moreover, when

viewed against the Communist Bloc's publicly announced intentions to wage an economic and political offensive against the Free World, China's trade policy of ties with underdeveloped countries causes concern.

The rational foundation of China's foreign trade policy, as the party and government officials view it, can best be understood when considered in the broad context in which policy is formulated—that is, in relation to the dominant national goals which have been officially designated as essential accomplishments. These goals are (1) to build a powerful modern industrial complex emphasizing heavy industry capable of providing the necessary tools and equipment for expanding industrial and agricultural production, (2) to guarantee that Chinese social and political institutions develop according to Communist ideals and objectives, and (3) to integrate economically with the other Bloc members so as to lend force and support to the Bloc's international ambitions for greater political dominion.

Given these goals, the Chinese method of attack follows the usual Communist pattern. In essence, it is to use every possible device in an effort to move forward with a balanced advance toward these fixed national goals. The role of foreign trade is in fact vital to the success of all that the government hopes to accomplish—a fact of which policymakers are fully aware.

The multipurpose role that trade is intended to play in promoting economic construction and in furthering national diplomacy stands out most clearly when considered first from an economic point of view and secondly from the political, although, in practice, the two aspects function together.

## Economic Considerations

On the economic plane, policy has been to tailor the nation's trade to fit the state's plans for achieving rapid industrial growth. Adjusting to this situation has brought about drastic social and economic changes inside China.

Economically, the Chinese Communists are faced with a situation common to most underdeveloped countries. Labor is plentiful, but the other two basic ingredients—land and capital—are scarce and highly inadequate. Population increases and a rise in living standards cause consumption to about equal or run slightly ahead of production increases. Industrialization requires that a means be found whereby capital for investment purposes can be accumulated. Industrial equipment and supplies have to be imported and paid for out of the nation's production.

*Paying for goods imported.*—China receives some financial assistance from the Soviet Union in the form of loans repayable in Chinese products. The latter, along with other Communist countries, is also providing equipment and vital technical assistance to China. In addition the country receives some foreign exchange from overseas Chinese. But China is cut off from major sources of investment capital in the West and, in the main, must—and does—rely primarily on its own resources; this can only mean exporting part of its annual production as a means of settling international

accounts. The burden of paying China's way in international trade with other Bloc countries and the Free World has fallen inevitably on the Chinese countryside. The state is exporting agricultural raw materials primarily. Exports of minerals and manufactures are of secondary importance, but both are reportedly increasing relative to farm products.

How Communist China has been able to make supplies available for exporting is a case of forced savings with a vengeance. The harsh methods used to speed up production and to limit consumption constitute much of the Chinese story under the Communist regime.

*Rationing and resource use.*—Communist methods start with the principle and state of mind that production is above all to be used for the purposes of the state and not to satisfy individual human wants directly. Austerity, self-denial, and an all-out drive to produce and save for capital formation and economic construction are demanded of every man, woman, and child. The workers are permitted to enjoy the fruits of their labor only to the extent consistent with the need to maintain physical capacity to carry a heavy workload and to keep some degree of morale. Maximum production and minimum subtraction for consumption create the largest possible accumulation of capital investment funds.

Pointing ahead, the regime dangles the "carrot" in the form of promises that once a base for heavy industry has been established, China will be able to manufacture more and more of its needs in machine tools and other equipment that now must be imported. In fact, considerable progress in this direction is already being claimed and is probably being realized. Also, it is further promised that as industrial and mining capacity grows, exports of minerals and manufactured items will increase with a planned step-by-step reduction in agricultural exports. The people are promised that production capacity will be used to improve living standards in the future.

Over the past 9 years this forced-saving concept, firmly held and applied, has had the effect of stopping virtually all imports of foodstuffs for home use. The policy decrees that the Chinese people get along for the most part on what the nation produces, and at the same time export the largest quantity possible of domestic production. In contrast, before World War II, China imported rather large quantities of food and fiber. But the Communist government reversed this policy abruptly after gaining control.

Strict adherence to current policy now dictates that importing be limited primarily to such items as complete industrial plants, heavy machinery, steel, research laboratories, essential transportation facilities, and other requisites for industrial construction. Consequently, these categories make up 60 percent or more of China's imports. Lesser amounts are allocated for providing agriculture with much-needed chemical fertilizer, insecticides, farm implements, and other requirements of modern farm production. But only a small fraction of the nation's enormous needs for such agricultural essentials are being met. The test for deciding on what to import in industry and agriculture is whether the imported equipment or material helps increase production.

The willingness and ability that the Communist totalitarian regime has demonstrated for imposing austerity are contrary to the principles of free people, but the effectiveness of forced-saving measures in accumulating capital investment and freeing goods for exporting from an impoverished society and the strength of Communist organization, which makes such austerity possible, are not to be underestimated from a short-range point of view. The Soviet Union used this technique to become the second largest industrial power in the world. The Soviets started from a stronger economic base in land and capital than the Chinese did but not a stronger one in labor; and, too, China has the Soviet Union's experience and economic aid which lends additional supports to economic growth even though China has to pay for the Soviet Union's assistance.

## Political Considerations

Communist China has an economic need to import equipment vital to its industrial growth. To pay for such equipment the Chinese would logically be expected to offer their goods for sale in world markets. If Chinese goods were realistically priced according to the cost of production based on cost accounting methods used by Free World countries the Free World would not be much concerned with such competition. Making foreign trade a political arm of the state, selling below cost, and using trade in political and diplomatic maneuvering are something else.

State trading, in which losses are absorbed by the state, results in unfair competition for the private trading concern, which lacks the means to compete with the resources available to a national government. The Free World too cannot but take thoughtful notice of the political aims of such trading in view of the Communist Bloc's admission that trade and the promise of trade are valued highly as a useful device in foraging for diplomatic gains and national objectives. In this respect the Communist Bloc is waging a widely heralded economic and political offensive against the Free World, aimed directly at the less-developed countries of Asia, Africa, and Latin America. Communist China is slated for a leading role in pushing this offensive in neighboring countries. Attempts to fulfill this mission are one of the important political forces guiding China's trading activities.

This drive by the Bloc features the use of economic aid, technical assistance, trade ties, and propaganda in a combined array of forces which are intended to loosen the underdeveloped countries' ties with the Free World and eventually to align these areas with the Bloc.

Up to February 1, 1958, Communist China's material contributions relative to the Soviet Union's were on a small scale, though large relative to China's resources. They consisted primarily of grants to Cambodia, Nepal, Egypt, Ceylon, and Yemen, totaling around \$55 million. China has also furnished limited technical assistance in some cases.

In trade China is more active. A specialty is stepping into situations where less-developed Free World countries with largely single-crop econ-

omies are having acute marketing problems. Under something of these circumstances, China has within recent years purchased rice from Burma, rubber from Ceylon, sugar from Cuba, cotton from Egypt, and so on. Undoubtedly the Chinese people could well use more of such items, especially food items. However, government policy is not to import food; this practice strongly suggests that the motive behind the trade stems, certainly in part, from the Bloc's political maneuvering.

*Selecting trading partners.*—Another goal that molds trade policy is the Bloc's inner-group goals of economic integration and self-sufficiency. The force and effect of this policy have wrought drastic reversals in the selection of countries with which China prefers to trade. In 9 years under the Communist regime, trade has been reoriented away from the Free World and toward Communist countries, until an estimated 75 percent of total trade is now with other Communist nations. This shift reverses the pattern before the Communists took over.

No trade has been carried on between Communist China and the United States since early 1951, when the United Nations declared Communist China an aggressor in Korea and imposed trade restrictions. This UN action required that member nations withhold from Communist China strategic materials that could be used for warmaking purposes.

Earlier the United States had declared a total embargo on exports to Communist China and prohibited all financial transactions with Chinese Communist nationals. In addition, the United States joined 14 other major trading nations who voluntarily imposed and enforced restrictions on strategic trade with Communist China of greater severity than those applicable to other Communist countries. Later, in an effort to revive trade with Communist China, most Free World countries except the United States reduced trade controls to the level of those applied to the Communist countries of Europe, and later eased trade controls applying to all Bloc countries. It is believed, however, that China shifted its trade to the Bloc primarily to conform with the Communists' policy of integrating the economies of their countries and only secondarily as a response to trade control pressures imposed by the West. If so, the shift is likely to stay basically unchanged with major emphasis on inner-Bloc trading.

*State control of foreign trade.*—With the tight control it maintains on foreign trade, Communist China has managed to shift from a persistent prewar deficit in trade to a balance or a slight surplus for recent years according to official Chinese figures.

The organizational machinery for controlling trade is set up as a part of the Trade Ministry. In general, Free World countries trading with China report that the machinery for handling trade works reasonably well. China attempts to make prompt deliveries, but, owing to domestic shortages and inadequate transport facilities among other possible causes, the Chinese were failing to fulfill their trade commitments toward the end of 1958 and at the beginning of 1959. Also, in May 1958 China backed out of an

agreement with business concerns in Japan involving a contract to engage in trade during 1958. This disruption came about more from political causes than from any inability to carry out the agreement because of a shortage of goods at that time.

Goods imported into China are received on condition that imports measure up to agreed quality standards. Inspection and final acceptance are the responsibility of Chinese officials. There is no evidence that this has caused serious disagreements over fairness and objectivity of the inspections.

## Trade Agreements and Balance of Payments

Trade agreements form an important function in China's foreign trade. The state has shown an eagerness to conclude agreements with as many Free World countries as possible, regardless of the amount of trade that could be transacted. Its efforts feature trade fairs, exchanges of trade delegations, barter agreements, price inducements, and easy credit terms.

Much of China's trade is on a barter basis which, from a competitive point of view, is significant for U.S. exporters of farm products in this way: The Chinese in concluding agreements for purchasing of industrial or other equipment may and often do insist that the country selling to China accept an offsetting amount of Chinese agricultural products. This of course, reduces marketing opportunities for other suppliers.

In negotiating trade agreements, the Chinese seem to seek relatively long-term arrangements. These have certain advantages in national economic planning, in that the extent of the obligation to be met and the sources of goods to be obtained can be incorporated on a firmer basis. However, there does not seem to be any rigid policy on this point. Similarly, the Chinese have shown flexibility in methods of payments by settling accounts in pounds sterling, for example, rather than barter goods. It is not believed that the Chinese have enough reserves to do extensive purchasing in sterling or other exchangeable currency. On the question of international accounts, the Chinese authorities have stated preference for an overall balance of trade, thus avoiding either deficits or building up large surpluses of foreign exchange. The stated reason for rejecting the economic concept that a favorable balance of trade is to be encouraged is that the accumulation of large amounts of foreign exchange under world conditions of currency control and variable rates of exchange would not be most favorable to the growth and stability of the Chinese economy. The government claims to have achieved a rough balance during the First Five-Year Plan while slightly exceeding volume of trade targets during the period.

In trading with the Free World, the Chinese have earned a modest sum of convertible exchange each year since 1949—the average amount annually being about \$119 million. Of course, the Chinese, largely without an oceangoing merchant fleet, would necessarily incur freight and insurance costs involved in world trade and necessitating foreign payments out of exchange earnings. Moreover, the Chinese Government's stated policy of

keeping imports and exports in balance annually strongly suggests that China would intentionally keep little more, if any, than a necessary working balance. In this framework and without foreign loans from the Free World the total amount that the Chinese will likely contract to import from outside the Bloc will be conditioned by the amount that it can sell or barter abroad. Of course, there is the possibility for maneuvering and shifts back and forth within these limitations as to trading partners among the Free World countries certainly, as well as between the Free World and the Communist Bloc. Trade is not balanced with each country. Also, the composition of Chinese exports may vary over time, in that more minerals and manufactures will be shipped and fewer agricultural products.

TABLE 2.—Free World trade with Communist China, 1947–57

Year	Imports from China	Exports to China	Balance of trade
	Mil. dol.	Mil. dol.	Mil. dol.
1947.....	417.9	672.2	—254.3
1948.....	488.3	534.3	—46.0
1949.....	426.2	324.1	102.1
1950.....	434.7	452.1	82.6
1951.....	424.7	446.2	78.5
1952.....	367.9	272.5	95.4
1953.....	432.7	287.4	145.3
1954.....	375.4	294.0	81.4
1955.....	494.4	316.6	177.8
1956.....	643.3	433.4	209.9
1957.....	623.5	523.2	100.3

Compilations of International Economic Analysis Division, Bureau of Foreign Commerce, U.S. Department of Commerce.

## Trade Promotion

From the time of the Communist regime's inception in 1949, the leadership has demonstrated a keen perception of the value of international trade and the promise of trade as an important tool in foreign policy and as a prime necessity for implementing the country's ambitious 5-year plans. Statistics show that the dollar value of China's trade with the Free World has trended upward significantly from a low point in 1949, indicating some success in expanding export availabilities and in finding additional markets.

By 1958, China claimed to have established trade relations with more than 90 countries. More than 30 countries of the world have accorded Communist China diplomatic recognition. Exchanges of official delegations should facilitate trade. Where diplomatic recognition has not been extended, this does not seem to have been a serious obstacle to trade in some cases—West Germany, for example. On the other hand, the question of recognition of Communist China was the prime motive for China's withdrawal from a trade arrangement with Japan in May 1958.

## Volume of Trade

Free World trade with China in 1947 totaled \$1,090 million, with Chinese imports exceeding exports by \$254.3 million. By 1952, 3 years after the Communists took over, trade had declined to only \$640.4 million, but the Communists had already taken steps to bring about a shift from a deficit to a surplus position in trading with the Free World. To date, this position has been stubbornly maintained, though with great difficulty in years when agricultural production has fallen short. Also, trade from one year to another with the Free World has been erratic, largely reflecting the ups and downs in domestic agricultural production affecting the supply of agricultural products that could be set aside and spared for export. But in addition to the annual variation, the impact of the Korean conflict, the subsequent embargo imposed on trade with China, and the later relaxation are also reflected, especially during the early 1950's.

In 1957, because of a poor crop year in 1956 and a mediocre year in 1957, exports to the Free World from China declined, even though the embargo was relaxed. Exports to the Soviet Union also declined. But Free World exports to China increased sufficiently that total trade continued to increase slightly. Yet, despite the long-term uptrend in this trade, China, for a country with one-fourth of the world's population, continues to account for a very small percentage of total Free World trade.

True, much of China's trade volume is now with the Soviet Union and other Bloc countries, but even if this too is considered, Chinese trade relative to world totals still remains small though not insignificant. The Chinese Communists report that the sum of their trade with both the Free World and the Bloc taken together has been rising as domestic mining, industrial, and agricultural production increases. Total trade<sup>1</sup> for 1956 is claimed to have reached US\$4,416 million, but admittedly declined in 1957, owing to shortages of agricultural products that were only partly offset by increases in exports and manufactures. This curtailment of exports of both the Free World and the Bloc dropped total trade for the year to US\$4,117 million. But by practicing strict austerity on the home front, cutting back industrial expansion, and controlling importing, the authorities could claim to have maintained a slight overall surplus in trade balances for the year. Official preliminary estimates for 1958 foresee a resumption of the upward pace, with a 14-percent increase in total trade in prospect for 1958. Projected, this 14 percent would make the total trade for 1958 roughly US\$4,693 million, which would be only 6.2 percent above the previous peak in 1956, however. Presumably, the 1958 trade will remain as in previous years, about evenly divided between imports and exports, hewing to government policy on balancing imports and exports.

<sup>1</sup> Total trade for 1956-58 is converted to U.S. dollars using a rate of exchange of 2.46 yuan to 1 U.S. dollar. To the extent that the Chinese yuan is overvalued relative to the U.S. dollar, Chinese trade is overvalued.

## Competitive Agricultural Exports

China, like the United States, exports in varying amounts a wide selection of farm products. Actually, competition between the two areas reaches significant proportions in marketing only the following commodity groups: Live animals and meat, soybeans and other oilseeds, eggs, rice, fruits and vegetables, hides and skins, and fats and oils. Such products as tea and silk, which are indigenous to China and quite important to Chinese trade, are not produced in the United States.

TABLE 3.—Agricultural exports: United States and Communist China's shipments by areas, 1957

Area	China	United States
	<i>1,000 dol.</i>	<i>1,000 dol.</i>
Free World countries.....	360, 100	4, 507, 379
Selected Free World countries <sup>1</sup> .....	323, 700	2, 143, 700
Soviet Union.....	318, 600	2, 400
Other Communist countries.....	(2)	<sup>2</sup> 68, 496

<sup>1</sup> Countries included are: Japan, Hong Kong, Malaya, Ceylon, United Kingdom, Netherlands, France, West Germany, Italy, Morocco, Egypt, and Indonesia.

<sup>2</sup> Not available.

<sup>3</sup> Poland and Danzig accounted for \$62,561 of U.S. trade with the Bloc; most of the amount going to Poland was covered by a U.S. loan.

**Soybeans.**—Sino-U.S. competition is sharper for soybeans than for any other product. The soybean is indigenous to China and, as a highly nutritive food, is used in the diet of nearly nine-tenths of the Chinese population. Important as soybeans are to the Chinese diet and food supply, they have historically played a leading role in China's foreign trade. Mainland China, including Manchuria, once produced most of the world's soybeans. Within recent years, largely since 1940, the United States has forged ahead in soybean production, replacing China as the world's leading producer. Now the United States is the chief supplier of Free World markets for soybeans and oil. U.S. exports of soybeans in 1957 were equivalent to about 20 percent of the 1956 U.S. crop, thus underlining the importance of foreign markets to the U.S. industry. In contrast to this 20 percent, China, owing to domestic needs, has great difficulty setting aside as much as 10 percent of its soybean harvest for exporting.

However, the soybean is a leading earner of foreign exchange for China, and the regime, needing exchange badly, is making a strong effort to expand production and exports. But total production lags behind official hopes and targets. In 1956 and 1957, unfavorable weather with floods in the important producing areas seriously cut yields. Production in 1958 appears to

have increased. But the regime is having trouble increasing per acre yields which remain comparatively low.

There are no solid figures on the total quantity of soybeans produced and the total amount that is being exported to Bloc countries. Official claims put production in 1956 at 10,234,000 metric tons and 1957 production at about 10 million. The 1958 production is officially claimed to have exceeded 12 million tons. Exports appear to be running around 1.1 million tons annually. About one-half of this amount goes to the Soviet Union. The remainder goes to other members of the Bloc and the Free World. If not reexported, Chinese soybeans going to Russia and most of the other Bloc members are not so significant to U.S. marketing from a competitive point of view, since these countries cannot pay for or will not likely purchase U.S. beans anyway. There is, however, the possibility that Bloc countries might buy U.S. beans from third countries if it were not for the Chinese source of supply.

TABLE 4.—Free World imports from Communist China, 1954–57

Item	1954	1955	1956	1957
	Mil. dol.	Mil. dol.	Mil. dol.	Mil. dol.
Live animals and meat.....	29.5	39.2	38.3	40.3
Dairy products and honey.....	.1	.1	1.3	1.1
Eggs.....	27.7	26.7	30.1	31.5
Rice.....	43.8	40.8	57.5	29.3
Other cereals and preparations.....	3.4	3.0	2.6	3.6
Fruits and vegetables.....	38.6	44.3	44.7	55.8
Sugar and preparations.....	1.3	.1	.2	.4
Tea.....	16.0	25.9	24.0	23.6
Other food.....	6.1	5.2	7.4	3.0
Beverages and tobacco.....	1.6	2.6	3.4	3.2
Hides, skins, and fur skins.....	1.3	5.0	9.8	10.3
Soybeans.....	22.2	42.0	38.0	33.4
Other oilseeds.....	12.1	26.1	32.3	18.9
Silk.....	10.8	11.1	13.6	12.4
Wool and other animal hair.....	6.5	13.7	19.6	16.7
Other textile fibers and waste.....	7.3	6.3	9.5	6.4
Bristles.....	9.9	14.8	8.4	7.7
Feathers.....	9.7	8.1	5.6	7.4
Other animal and vegetable crude matter.....	25.9	26.6	29.3	29.9
Fats and oils.....	16.2	16.5	31.8	25.2
Total agricultural.....	290.0	358.1	407.4	360.1
Other commodities.....	85.4	136.3	235.9	263.3
Total all commodities.....	375.4	494.4	643.3	623.5

Before World War II, China exported soybeans and soybean products at an average rate of 2,800,000 tons (in terms of soybeans). Thus, current

exports are not back to prewar levels. The domestic market is much larger now than prewar. Moreover, the government, in addition to production problems, has had trouble collecting and transporting soybeans on a steady supply basis. The effects have been to reduce the importance of Chinese competition in the Free World relative to the prewar period.

By dollar value, U.S. exports for 1957 amounted to \$217.7 million as compared with \$33.4 million supplied by Mainland China. Sales by the Chinese were only 15.3 percent of U.S. sales for the year, and the Chinese average for the past 4 years has been about \$34 million. It would be misleading, however, to conclude, as the foregoing might seem to suggest, that Chinese-grown beans are no longer an important competitor for U.S. products in the markets of Western Europe and especially in the nearby Japanese market. That market imported an average of 808,861 tons of soybeans annually in 1955-58. During the 1951-55 period, Communist China supplied an average of only 12 percent of total Japanese soybean imports, but the proportion went up sharply and reached 25 percent in 1955, held about steady for 1956 and 1957, then declined sharply to only 9.9 percent in 1958. The 1958 figure, however, is for only the first part of the year and shows the effects of the disruption of Sino-Japanese trade that took place in May 1958 and the continuing impasse in trading relations that extended through the remainder of 1958. At the end of the first quarter of 1959, Sino-Japanese trading had not been resumed. The fact stands out, however, that before the rupture of trading relations, China had regained an important position in the Japanese market and, once trading relations have been restored, China can be expected to continue to be an active competitor for the important Japanese soybean market.

In the Japanese market, Chinese-grown beans have a long history of use in making the traditional Japanese foods, such as shoyu, miso, tofu, and natto. Chinese beans are hand-picked, cleaned, and exported in sacks and are virtually free of foreign material and split beans. U.S. beans, on the other hand, are harvested mechanically and exported in bulk. Official U.S. grade standards for the grade of soybeans that the Japanese, for price reasons, are most interested in buying permit a limited amount of foreign material, broken beans, and dark-colored beans. Some Japanese manufacturers of human foods criticize U.S. beans, especially for the foreign material present, and purchase Chinese beans, even though U.S. beans are usually higher in protein and oil content. For U.S. beans to become more acceptable and hence more effective in competing for the food manufacturer's market in Japan, a variety of soybeans is needed which has a white hilum, uniform size, a thin seedcoat, a high protein content, and a low oil content. But U.S. beans supplied on a variety or a stricter grading basis would, in either case, likely incur higher costs; and since price is an important factor this complicates the problem for U.S. growers selling to Japan. However, it should be added that the Japanese crush about 500,000 tons of soybeans annually for oil and soybean meal. U.S. beans with higher oil content have

the advantage when crushed for oil, though foreign materials in the beans is still objectionable.

China's proximity makes possible a lower delivered price to Japan, especially when compared to similar import sources from as far away as the United States. The Chinese have proved to be hard bargainers, however; a large part of the savings in transportation cost has accrued to China rather than Japan. Chinese prices need be shaded only enough to make conditions of trade attractive and need not give Japan the full benefit of the differences in transportation costs. The price of U.S. beans puts a ceiling on what the Chinese can sell at.

There is considerable receptivity in Japan toward greater trade with China, because of the transportation costs factor and because some Japanese believe China to be an attractive future market for Japanese manufactured goods and a source of raw materials. Moreover, trade with China does not require the expenditure of scarce dollars.

In Western European markets, the United States has an advantage. Soybeans are not used for food, as in Japan, but for oil and livestock feed. The United States is closer to Europe than China is, although the transportation advantage favoring the United States is not as great as the advantage that the Chinese have in the Japanese market. Also, countries in Western Europe have dollar earnings sufficient to buy beans wherever the price and other terms of trade are most attractive.

China is able to sell soybeans to Europe by offering shipments that are relatively free from foreign material, have fewer split beans, and are priced low enough with terms of trade attractive enough to make sales. Then, too, at the government level in European countries, there is a realization that if China is to buy industrial equipment and supplies from the Free World, Chinese exports will generally have to be taken in payment. However, this last factor would not come into play where purchases of private trading concerns are not regulated by government.

It is certain that China will continue as an important soybean producer and some of the harvest will be exported. The quantities that China makes available for export will vary, depending on growing conditions, the government's success with the plans and programs being pushed to increase production—particularly yields per acre—and the effectiveness of the rationing program. But population is increasing too, and unless the quantities of soybeans going to the Bloc are decreased, it is difficult to see how China could increase Free World marketing greatly from increased production. Of course, the state can, if it wants to, cut domestic consumption further and increase exports. The urgency of the need for foreign exchange exercises a strong if not a decisive controlling influence.

*Live animals and meat products.*—Free World trade data show that Communist China exported live animals and meat products valued at \$40.3 million in 1957. During the same year China's exports to the Soviet Union are said to have amounted to \$36.2 million.

Among the Free World countries, Hong Kong is China's major outlet, accounting for nearly three-fourths of China's exports of live animals and meat products. West Germany also purchased substantial quantities of meat products in 1957. Egypt, the Netherlands, and Malaya, among others, also figured in this trade in a small way.

The nearly \$30 million worth of meat from Mainland China going into Hong Kong consists largely of live animals: Hogs, poultry, and some cattle and buffalo. A large percentage of the animals are slaughtered in Hong Kong and consumed as fresh meat. The United States can compete with this competition largely by supplying frozen meats.

Chinese meats and meat preparations sold in Western Europe compete with U.S. products especially in West Germany. Egypt and Indonesia showed up as customers for China in 1957, but purchased no meat or meat preparations from the United States.

As in other aspects of their agricultural economy, the Chinese are trying to increase livestock production. However, the Communist system is least adept in handling livestock. Shortcomings notwithstanding, the government is exporting on a substantial scale.

*Rice.*—Mainland China produces more than one-third of the world's rice. But for the period 1933-37, it imported an average of 804,000 metric tons of rice annually, valued at 7.2 percent of total imports. Significantly, from this prewar position of heavy importing, China has now switched to exporting and has increased its rice exports to the Free World every year since 1950. Exports reached a peak of 545,000 tons in 1956, following a bumper harvest in 1955; then declined to 279,900 in 1957<sup>2</sup> owing to heavy flood damage to the 1956 crop. Encouraged by good crop prospects in 1958, officials stepped up exports sharply, to possibly as much as 900,000 tons for the year. Indonesia, Ceylon, Pakistan, and Hong Kong are currently the principal Free World markets. Japan was also an important market for China until trade relations were broken off. The Chinese market area has shown some indication of widening to include Europe and Africa.

U.S. rice going into countries purchasing rice from Communist China is largely being exported under U.S. aid programs. In 1957, most of U.S. dollar sales in rice went to such countries as Canada, Cuba, and Western European areas. China is reportedly offering rice for sale in Western Europe, where it might compete slightly with U.S. rice. Also, the United States and China have in recent years competed for markets in Japan. In the main, however, Chinese-grown rice is not at present a big factor in influencing U.S. sales directly and in specific markets, nor is it likely to become a major force, although there may be occasions when Chinese offerings will have a bearing.

However, large offerings of Chinese rice dumped onto the world market at any time at low prices could disrupt orderly marketing and cause marketing difficulties for Free World countries. Most of the Asian countries

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<sup>2</sup> FAO Monthly Bulletin of Agricultural Economics and Statistics, December 1958.

worst affected are receiving economic aid and technical assistance from the United States. Any loss of foreign exchange earnings, of which rice sales are a major source, makes their problem of achieving economic stability and growth more difficult and possibly more expensive to the United States.

It should be noted, however, that the Chinese population is increasing by some 13 million people annually, requiring more rice. Moreover, the government has strong reasons for rebuilding stocks during good harvests against recurring emergencies. Also, the Communist Bloc has been posing as a friend to the underdeveloped Southeast Asian countries. Disrupting world rice markets on which these countries depend so heavily for much of their income would be embarrassing to explain. This could serve as a further brake on exports. Meanwhile, the threat to jeopardize the rice market by price-cutting and other devices serves the Communists as a political and economic weapon to hold over neighboring rice-producing countries.

*Flue-cured tobacco.*—China is one of the world's leading tobacco producing countries, but only minor quantities of Chinese leaf are being exported to the Free World. In 1957, less than \$2 million worth of both tobacco and tobacco manufactures went to those markets—an insignificant amount in total world tobacco trade. Also, the Chinese Government has been importing some low-quality tobacco from neighboring countries, which probably is a case of bringing in low-quality leaf for domestic uses and exporting the better quality Chinese-grown tobacco.

The Soviet Union's and Poland's statistical releases show imports of sizable quantities of Chinese tobacco. Soviet imports for 1957 are reported at 44,400 metric tons, up 20,000 tons from 1955 and 11,500 tons above 1956 levels. Polish imports from China are given at 3,050 tons in 1956 and only 1,180 tons in 1957. Figures are not available for other Bloc countries, but China has sizable trade with them and it appears reasonable to conclude that some tobacco is included as a part of payments.

It is also likely that some of the Chinese tobacco going into the European Bloc area is finding its way into the trade channels of Western Europe as reexports. Reportedly, tobacco produced in China has been offered at low prices in the European market, but the quality is poor.

Free World trade statistics indicate that in 1957 Hong Kong, the Netherlands, West Germany, Egypt, and Indonesia, among others, purchased small quantities of tobacco from China. The United States also sells flue-cured tobacco to these and many other Free World markets. But under present conditions, Chinese tobacco, by reason of quality and supply, offers only minor competition even though both countries compete for the same world markets. Competition for U.S. tobacco is far more serious from other tobacco-growing regions of the world.

However, China has set high production goals for tobacco, and production is increasing, though apparently not as rapidly as the planners hoped; but nothing is available to indicate any changes in quality. Some part of

TABLE 5.—Specified agricultural products: Quality and value of exports from Communist China to the Soviet Union, 1955–57

Commodity	1955		1956		1957	
	Quantity	Value	Quantity	Value	Quantity	Value
	1,000 m.t.	Mil. dol.	1,000 m.t.	Mil. dol.	1,000 m.t.	Mil. dol.
Soybeans.....	483.6	47.5	548.5	53.6	579.0	55.5
Oil cake.....	15.0	1.0	15.0	1.0	14.9	1.0
Peanuts.....	198.1	39.2	182.0	35.8	98.2	18.9
Oilseeds, other.....	71.0	11.8	64.6	10.3	35.4	5.4
Raw material of animal origin.....		17.2	.....	14.6	.....	11.0
Rice.....	292.7	41.2	457.6	64.3	181.1	25.4
Wheat and wheat flour.....	50.6	5.5	59.1	6.6	21.5	2.9
Millet.....	15.0	1.0	15.8	1.0	13.0	.9
Live animals and meat.....	151.4	70.4	143.4	66.0	72.8	36.2
Eggs.....		4.6	.....	2.7	.....	4.0
Tea.....	10.2	10.6	12.6	12.5	11.5	12.2
Tobacco.....	24.3	22.0	32.9	30.0	44.4	41.0
Tung oil.....	12.0	4.3	15.0	7.0	15.0	6.9
Fruits and vegetables.....		15.0	.....	20.3	.....	27.1
Vegetable oils.....	91.7	29.6	81.3	25.7	39.7	13.2
Hides and skins.....		3.5	.....	9.1	.....	7.9
Hemp and jute.....	27.7	7.3	27.5	7.2	5.0	1.0
Ramie.....	13.9	7.1	12.7	6.4	5.5	2.9
Wool.....	14.5	23.6	13.0	21.4	13.7	23.9
Raw silk.....	2.2	21.7	2.3	23.5	2.1	21.3
Total.....		384.1	.....	419.0	.....	318.6

Soviet statistics published in 1958. Rubles converted to U.S. dollars at the official rate of 4 rubles to U.S.\$1.

TABLE 6.—Specified agricultural products: Exports from Communist China to Poland, 1954–57

Commodity	1954	1955	1956	1957
Tung oil..... metric tons..	2,645	1,700	1,690	1,502
Peanuts..... 1,000 metric tons..	23.4	30.5	30.8	33.0
Soybeans..... do....	30.0	33.0	27.8	40.2
Tobacco..... metric tons..	1,999	2,499	3,050	1,180
Tea..... do....	1,061	1,690	1,810	2,590
Rice..... 1,000 metric tons..	4	6	6	4
Wool..... metric tons..	183	461	140	370
Cotton..... do....	3,200	3,021	1,470	2,226

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the Chinese tobacco now going to Bloc countries could conceivably be channeled into Free World markets. Or, again, the government could further restrict domestic consumption. Any or all of these moves would step up competition for markets.

*Fats and oils.*—Vegetable oils and oilseeds have long occupied a major role in the Chinese internal economy. After 1900, such oils and oil-bearing materials as tung oil, peanuts, rapeseed, cottonseed, sesameseed, tea oil, linseed, perillo, castorseed, and hempseed, plus the large soybean crop, entered increasingly into the export picture. Despite chronic domestic shortages, China is currently shipping or has shipped within recent years substantial quantities of vegetable oils and seeds to such Free World areas as Japan, Hong Kong, Western Europe, and Egypt.

China is not an important source of animal fats—lard and tallow—even though domestic production is substantial. The quality is poor and little is exportable.

The United States, on the other hand, is by far the world's leading producer and exporter of high-quality animal fats as well as vegetable oils and oilseeds. Since both the United States and China sell in the same market areas, such as Western Europe and Japan, a certain amount of competition arises. However, China has been having some of its most difficult agricultural problems in expanding production of vegetable oils, especially the edible oils. Increasing the production of tung oil also appears to be a slow and stubborn process. With such production difficulties, and the known severe domestic shortages plus growing internal requirements, it does not seem probable that Chinese exports will pose any new threats to U.S. markets on a sustained basis.

*Fruits and vegetables.*—Many of the important fruits of the world are indigenous to China, including such well-known ones as peaches, apricots, and sweet oranges; and owing to the country's wide range of temperature, almost all types of fruit are produced.

Similarly, it is said that China grows more kinds of vegetables than any other country in the world. The Chinese peasant is highly skilled at gardening and, with ever-present population pressures, necessarily makes the fullest use of every foot of garden land.

It is not surprising, therefore, to find that in 1957, Chinese exports of fruits and vegetables to the Free World amounted to nearly \$56 million, up more than \$11 million from 1956, and that fruits and vegetables have become the most important single category of farm products exported to the Free World. This is about 15.5 percent of U.S. shipments during the same period, which makes China a sizable competitor. However, it should be pointed out that 45.1 percent of the Chinese exports went to nearby Hong Kong; Malaya accounted for another 22.7 percent; and Japan received 16.7 percent. West Germany was the only country in Europe or elsewhere in the Free World that imported significant quantities of Chinese fruits and vegetables in 1957.

The United States, like China, grows and exports large quantities and many kinds of fruits and vegetables. Unlike the Chinese crop, much of the U.S. crop is canned or frozen for exporting. The same market areas that purchase Chinese exports also buy from the United States. But in the Far East, there is the problem of meeting the rather low Chinese prices and of the local population's apparent preference for fresh commodities.

Reports from Communist China indicate that significant emphasis is being put on programs to expand production and commercial processing facilities for fruits and vegetables. Both canning and freezing facilities are reportedly being constructed. There is undoubtedly room for great improvements along these lines which could expand the market area for Chinese-grown fruits and vegetables. And with the collectivized type of farming and centralized processing, the government has the means of getting control of the produce for exporting and pushing larger quantities into world trade if production and processing problems can be solved and a suitable market is available.

*Hides and skins.*—Communist China's exports of hides and skins to the Free World increased sharply from \$5 million in 1955 to \$10.3 million in 1957. Percentagewise, this is an impressive increase, but the total amount is only a small part of world trade even so. Japan, Hong Kong, and West Germany were China's leading Free World markets for hides and skins in 1957. These countries are also major buyers of like or similar U.S. products.

With China developing its own light manufacturing and handicraft industries, it would seem preferable for the domestic industry to utilize the home-produced supply of hides and skins, and export manufactured items, such as gloves, shoes, and luggage. Domestic need, plus the difficulties of developing a strong livestock industry, would appear to greatly minimize the extent of Chinese competition to be expected in marketing hides and skins. It is not, however, to be expected that China will quickly drop out of the market. The need for foreign exchange is too pressing.

*Cotton.*—Communist China, though one of the three largest cotton-producing countries in the world, imports raw cotton, especially of the long-staple variety. Imports of cotton have ranged from 150,000 to 350,000 bales in recent years, with the major suppliers in the past 2 years being Egypt, Pakistan, Syria, and Sudan. China also exports small quantities of raw cotton. It is not, however, in the direct marketing of cotton that Chinese production and exporting have the most meaningful competitive significance for the United States, but in the sale of increasing quantities of cotton textiles,<sup>3</sup> for that reduces the amount of raw cotton other textile-exporting countries will buy from the United States.

This type of competition—much in the limelight during the past year—comes about as a result of the United States' being the major supplier of

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<sup>3</sup> See FAS M-52, "Communist China's Cotton Textile Exports: Their Growth and Their Effects on World Markets," Foreign Agricultural Service, April 1959.

raw cotton to Japan and a substantial supplier to other cotton textile manufacturing and exporting countries in the Far East.

Pushing the sale of their textiles vigorously, using diplomatic channels, offering generous credit terms, giving cut-rate prices, and promoting trade in other unusual ways, the Chinese have succeeded in making some inroads particularly into the Southeast Asian markets. Countries selling cotton textiles to these markets, notably Japan, Hong Kong, India, and Pakistan, have found their sales declining where Chinese sales have increased.

The United States, never a major supplier of cotton textiles to Southeast Asia, has also lost ground in that area. A 36-percent drop took place between 1956 and 1957, when U.S. exports of cotton manufactured goods dropped from \$17.7 million in 1956 to \$10.7 million in 1957.

In 1957, Communist China sold to Indonesia an estimated \$10.9 million worth of cotton fabrics, to Hong Kong \$15.4 million, and to Malaya about \$4.6 million. These three areas took only \$600,000 worth of fabrics from Communist China in 1953. China has also shown an interest and some success in stepping up exports to other Southeast Asian countries, such as Burma, Thailand, and Cambodia.

It should be pointed out, however, that the Chinese have not had an unbroken chain of success in promoting trade despite their ingenuity and determination. Already Malaya and Thailand have taken steps to protect their domestic textile industries from low-priced Chinese goods. But Chinese successes have been enough to cause concern among Free World countries losing trade. These countries are particularly concerned about the competitive methods being used by China, especially the practice of setting a price so as to gain a foothold in a market even though the price received may not be sufficient to meet the cost of production.

*Eggs.*—In 1957 China exported about \$31.5 million worth of eggs to the Free World. The bulk of Chinese eggs went to Hong Kong, West Germany, the United Kingdom, Italy, and Malaya. During the same period, U.S. exports of eggs in the shell amounted to \$15.9 million. Most of U.S. exports, however, went to Latin American Republics, which together accounted for \$11,954,000 worth of U.S. exports. Canada (including Newfoundland and Labrador) took another \$1,448,000. Countries buying Chinese eggs took only minor quantities of U.S. exports.

Historically China has been a leading world producer and a heavy exporter of poultry products. Egg products made up 12.3 percent of China's 1933-37 agricultural exports, but had declined greatly during World War II. Poultry has generally been kept more or less as small scavenger flocks consisting mainly of chickens, geese, and ducks. Poultry production is an enterprise, however, that fitted prewar Chinese conditions relatively well. It is not known how much production has been affected by organizing the peasants into collectives and communes, but this would likely shift production toward a more commercialized operation with greater numbers of birds being produced in establishments set up for the purpose.

Actually, very little is known concerning the current status of the Chinese poultry industry. However, in line with the general approach toward increasing agricultural production, and considering the importance of the poultry industry, it would seem probable that efforts to increase production of both poultry and eggs are being made. It is also to be expected that a portion of domestic production will be exported.

## Changes in Composition of Trade

One of the fundamental changes that the Chinese Communists are striving for in foreign trade is in type of products to be exported. They have promised a step-by-step decline in the exporting of agricultural supplies, as minerals and industrial products for export increase. Is there any evidence that progress is being made in that direction? An examination of the last 4 years for which Free World figures can be computed shows that in 1954, 77.2 percent of China's exports to the Free World consisted of agricultural products; by 1957 the percentage had declined to 57.8 percent. This shift occurred while total exports were going up from \$290 million in 1954 to \$623.4 million in 1957. It should be noted, however, that agricultural products were in short supply in 1957. Also, several of the domestic industries, such as textiles and leather goods, depend on agriculture for raw materials. A shift from dependence on agricultural exports offers China an important means of exporting not only basic raw materials but also its most plentiful resource—labor. Also, it is not difficult to envisage some future date when China's mushrooming population and possibly increasing consumer purchasing power may make exports of foodstuffs and industrial crops impossible. Shifting to a greater reliance on industrial production is an important hedge against such an eventuality.

This evolving change can bring China increasingly into the competition for world markets for light manufactures, such as flashlights, radios, and bicycles. There is already some evidence of this. Such a change will create new problems for Japan and other Free World countries that export manufactured items of similar types.

Chinese Government spokesmen have stated that concerted efforts would be made to expand China's trade with the underdeveloped areas of the Afro-Asian group. Such a policy has long-run political overtones as well as economic objectives in mind. Already some progress has been made toward this objective.

During 1957, nearly two-thirds of China's export trade with the Free World was centered in the Far East, Africa, and the Middle East. Hong Kong and Japan accounted for a large part of this amount. These two areas do not, of course, fit into the underdeveloped category, but they do lie close to China and within the area where China hopes to exercise strong political and economic influences.

## **China's Major Free World Trading Partners**

Specifically, Sino-Free World trade centers in some dozen countries headed by the British Crown Colony of Hong Kong, with Japan, West Germany, the United Kingdom, and Malaya also ranking well up in relative importance. These countries accounted for 88 percent of China's 1957 total trade with the Free World, and include both industrialized and under-developed nations. For the industrialized countries, a major consideration in fostering this trade relationship is that they are heavily dependent on selling in foreign markets the machinery, motorized equipment, and other industrial products that are coming off domestic assembly lines in exportable quantities. And China, a producer of primary goods, needs industrial equipment that can be obtained in exchange for what it has to sell. This type of exchange between China, Western Europe, and Japan has a long history and is the big force leading to renewal of trade after the Communists took over.

Not the least of Communist China's competitive advantages in trade is the fact that many of the Southeast Asian areas, such as Hong Kong and the Malayan Federation, have large Chinese populations that have retained taste preferences for certain foods produced in Mainland China. Moreover, much of the commerce of the areas in which Chinese constitute a sizable body of the population is in the hands of local Chinese. The merchant group particularly provides a ready vehicle for putting Chinese-grown and processed products on the market in these countries.

## **China's Exports to Soviet Union**

In 1958, Russia for the first time published trade data covering Sino-Soviet trade; the data were for 1954-57. So far, China continues to issue only statements to the effect that around 75 percent of its trade is with other Bloc members. Poland is the only other Bloc nation to publish data on its trade with China. This information does not offer a complete picture of trade between China and these countries, but it does provide additional insight into the nature and amount of Sino-Bloc trade.

From a competitive point of view, the fundamental question concerning Sino-Bloc trade is whether China will continue pushing farm products toward the Bloc or turn in greater force toward Western Europe and Japan for more of its import needs in industrial equipment, offering agricultural products in payment.

This could obviously enlarge the role of Chinese products in Free World trade, and sharpen competition for U.S. products. The question raised is one that cannot be answered with any degree of confidence. On balance, it seems that the weight of the evidence favors a continuation of China's present policy of integrating trade with the Bloc. Only recently, Russia announced a new \$1.25 billion loan to China which will provide 78 new plants with payments to be made under existing arrangements. This strongly suggests

TABLE 7.—Selected countries: Imports of all commodities and principal agricultural commodities from Communist China, the United States, and all sources, and U.S. and U.S. and Chinese share of imports, 1957

Country	All commodities			Principal agricultural commodities			All commodities, share from—		Principal agricultural commodities, share from—	
	All sources	United States	China	All sources	United States	China	United States	China	United States	China
Japan.....	Mil. dol. 4,283.6	Mil. dol. 1,226.6	Mil. dol. 80.5	Mil. dol. 1,616.1	Mil. dol. 450.7	Mil. dol. 49.0	Percent 28.6	Percent 1.9	Percent 27.9	Percent 3.0
Hong Kong.....	901.2	77.4	198.0	306.0	24.1	109.1	8.6	22.0	7.9	35.7
Malaya.....	1,431.0	41.9	52.2	384.5	11.5	30.9	2.9	3.6	3.0	8.0
Ceylon.....	378.9	13.3	17.6	200.1	6.2	17.5	3.5	4.6	3.1	8.7
United Kingdom.....	11,411.6	1,090.0	39.9	5,492.3	577.8	27.4	9.6	.3	10.5	.5
Netherlands.....	4,105.1	548.0	9.8	895.6	210.9	8.1	13.3	.2	23.5	.9
France.....	6,169.8	585.2	14.0	2,081.0	130.1	11.3	9.5	.2	6.3	.5
West Germany.....	7,741.9	944.0	41.0	3,107.1	530.3	35.4	12.2	.5	17.1	1.1
Italy.....	3,626.4	659.0	6.9	1,080.9	157.2	5.7	18.2	.2	14.5	.5
Morocco.....	405.8	47.0	12.5	.....	11.6	12.5	11.6	3.1	.....	.....
Egypt.....	524.3	40.1	20.6	136.8	11.7	15.2	7.6	3.9	8.6	11.1
Indonesia.....	797.0	109.3	27.0	117.8	21.6	1.6	13.7	3.4	18.3	1.4
Total.....	41,776.6	5,381.8	520.0	15,418.2	2,143.7	323.7	12.9	1.2	13.9	2.1

Compiled from customs reports and other sources.

that China has obligated itself to continue with a heavy volume of agricultural exports to the Soviet Union in the years ahead, probably through 1967.

One of the most convincing reasons for thinking that China might become dissatisfied with its present trading alinements is to be found in the incompatibility of the Chinese and other Bloc economies. Taken strictly from an economic point of view, China—basically a producer of primary goods—is moving against the natural current of economic trade in arranging trade with areas that are also, in the main, producers of primary goods or hardly more than self-sufficient in industrial production. Certainly, most other members of the Bloc could well use the industrial equipment and supplies being sent to China, either to develop their own economy or to bolster the Bloc's economic aid and trade offensive in the underdeveloped areas of the world. Moreover, other members would probably otherwise get along without much of the foodstuffs purchased from China if it were not necessary to accept such goods in order to receive payments for exports.

Basically, integrated Bloc trade is an outgrowth of an ideological and political identity of views and purposes. What the future will unfold in overall Sino-Soviet solidarity remains to be seen. It seems reasonably certain that so long as present conditions prevail China's trade policy and other ties with the Bloc will follow along current lines. This does not necessarily mean, however, that China will continue to carry on three-fourths of its trade with the Bloc. The ratios could vary significantly in any short-run period while still following a policy of emphasizing integrated Bloc trade.